DOCTOR OF CLINICAL PSYCHOLOGY (DCLINPSY)

Doctorate in Clinical Psychology : Main Research Portfolio

1) What is known about the impact of Tourette's syndrome on socio-emotional development across the lifespan?; 2) An evaluation of a tailored training program on the early-detection of ultrahigh risk for a first episode of psychosis, provided by the Bath and North East Somerset Early Intervention in Psychosis Service; 3)How are fear of illness recurrence, maladaptive coping behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?

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Abstracts

Critical Literature Review

While many systematic reviews have drawn together findings from studies that have looked at the onset and course of Tourette's Syndrome and the various pharmacological and behavioural treatments that exist for the syndrome, no review has yet drawn together what is known about socio-emotional development in those with TS. The current review provides a synthesis and critical evaluation of the literature regarding the impact of the syndrome on socio-emotional development across the lifespan. A systematic search of PubMed, APAPsychNet, SCOPUS and Web of Knowledge databases was performed yielding 964 articles; seven of which met inclusion criteria and were deemed of medium to high quality based on the Newcastle-Ottawa Scale. Studies were synthesised broadly under concepts described in the Four Branch Model of Emotional Intelligence (Mayer & Salovey, 1997) and the practical model for the assessment of interpersonal problems (Spence, 2007). Research on theoretically robust explorations of the impact of TS on socio-emotional development in children and adults with TS is in its infancy. Implications for clinical practice and future research are discussed.

Keywords: Tourette's syndrome, Social adaptation, Peer relationships, Socio-emotional development, Emotional control

Service Improvement Project

Staff in the voluntary and third-sector are more likely to have already built trusting relationships with young people and are ideally positioned to notice any changes in the young person that might indicate the prodrome of a first episode of psychosis. Offering training and teaching programmes in psychosis to community staff can therefore help in the early identification and referral of young people with first episode psychosis. This study explored the impact of a bespoke training package offered by an Early Intervention in Psychosis Service in the South of England on staff's knowledge and confidence in detecting young people at ultra-high risk of developing psychosis and of the referral pathway for an EIP team.

Twenty-two members of staff from two third-sector organisations were recruited for this evaluation. Data from pre-, post- and follow-up questionnaires were analysed using parametric quantitative analytic strategies. Results revealed that the training had a positive impact on the knowledge of staff and these gains were maintained even at follow-up. A similar trend was seen for confidence; however, there was a slight drop off in scores at follow-up. The total number of referrals from these services to the EIP team did not increase significantly; however, there was an increase in the number of staff making referrals. Qualitative feedback about expectations from training, barriers to accessing the consultation component of the package and what could be improved in the training, was sought. The findings and recommendations from this evaluation will be used to suggest improvements to future rounds of this bespoke training package.

Keywords: Psychosis, Early Intervention in Psychosis Services, Third-sector staff, Voluntary sector staff, Training, Psychosis awareness, Referral rates

Main Research Project

Purpose. Research investigating fear of illness recurrence and mental health anxiety in psychosis is lacking. This study investigated the extent and correlates of FIR and mental health anxiety, differentiating psychosis from mental health problems without psychosis.

Method. A cross-sectional design was employed. Thirty-nine participants in recovery from psychosis, eighty-two in recovery from other mental health difficulties and sixty-one healthy controls aged 18-73, were recruited from NHS services and via social media. Self-report questionnaires were used to measure mental defeat, mental health anxiety (MHA), fear of illness recurrence (FIR), maladaptive coping behaviours and psychological distress.

Results. It was hypothesised that psychosis would be more negatively evaluated in terms of its likely consequences than non-psychotic mental health problems, leading to greater FIR; this was indeed the case, although levels of FIR in non-psychotic mental health problems were rather high. Interestingly, there were no other differences between these groups (in terms of mental defeat, anxiety, depression, social functioning, and maladaptive coping behaviours). The hypothesised relationship between FIR and MHA was also found, and maladaptive coping behaviours were associated with FIR and MHA, again as hypothesised. Mental defeat was associated with FIR and psychological distress (anxiety and depression).

Conclusions. This study found that overall, people defining themselves as in recovery are worried about the recurrence of their mental health problems and the extent of this is linked to mental health anxiety. Clinical and research implications are discussed.

Keywords: Psychosis, Recovery, Fear of recurrence, Predictors, Mental health anxiety, Mental defeat, Maladaptive coping behaviours

What is known about the impact of Tourette's syndrome on socio-emotional development across the lifespan?

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Proposed journal: Journal of Child and Family Studies.
This journal was chosen as it publishes peer-reviewed articles and reviews on topical issues pertaining to the mental wellbeing of children, adolescents and their families (Appendix A)

Introduction

Tourette Syndrome (TS) is characterised by multiple motor tics and one or more vocal tics that persist for more than a year (American Psychological Association, 2013). Tics vary in severity and manifest in different ways over time and can be aggravated by stressors and other circumstances (Conelea & Woods, 2008; Woods, Marcks, & Flessner, 2007). Sufferers of TS are able to control their tics for brief durations (Christie & Jassi, 2002). The course of the syndrome, co-occurring conditions and tic characteristics in adults with TS is still under-researched. A recent study (Jankovic, Gelineau-Kattner, & Davidson, 2010), however, reported that the syndrome can persist into adulthood and that it is an exacerbation or relapse of tics from childhood that are the true culprits in the so-called adult-onset version of TS. Adult TS is different from childhood TS, in that facial and truncal tics are more likely to be present and there is a greater association with substance misuse and depression. Lantz (2008) suggests that the social and emotional impact of tic disorders in adults over the age of 65 can be profound. This is because even severe tic symptoms are more likely to be dismissed as 'factitious'. In addition, this cohort is more likely to keep themselves separate from others and therefore experience isolation, boredom and low mood. Difficulties in the social and emotional spheres have been observed across the lifespan of people experiencing TS (e.g. Conelea et al., 2011; Storch, Lack, et al., 2007).

An individual's relationship with themselves and with others is a good indicator of the extent of their socio-emotional development (J. Cohen, Onunaku, Clothier, & Poppe, 2005). The authors suggest that successful socio-emotional growth in children includes the capacity to display and regulate affect and to create and nourish satisfying relationships. The National Scientific Council on the Developing Child (as cited in California Department of Education, 2017) states, "the core features of emotional development include the ability to identify and understand one's own feelings, to accurately read and comprehend emotional states in others, to manage strong emotions and their expression in a constructive manner, to regulate one's own behaviour, to develop empathy for others and to establish and maintain relationships" (p. 1). Emotional development plays a critical role in helping children and young people competently negotiate complex social interactions and relationships.

Models of Socio-Emotional Development

The four-branch model of emotional intelligence proposed by Salovey and Meyer (1997, p. 11) describes the four branches of emotional intelligence as:

- “Perception, Appraisal and Expression of Emotion
- Emotional Facilitation of Thinking
- Understanding and Analysing Emotions; Employing Emotional Knowledge
- Reflective Regulation of Emotions to Promote Emotional and Intellectual Growth”

To quote the authors, the branches of the model are "arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lowest level branch concerns the (relatively) simple abilities of perceiving and expressing emotion. In contrast, the highest level branch concerns the conscious, reflective regulation of emotion" (p. 10).

Social functioning can be conceptualised within the Practical Model for the Assessment of Interpersonal Problems (Spence, 2007) The model focuses on four levels of assessment that reflect the type of information that may be considered during an assessment process. They are:

- Long-term outcomes such as qualitative and quantitative aspects of relationships in marital, family, occupational and friendship domains as judged by self or by others.
- Short-term outcomes such as immediate impact from social interactions as judged by self and others or objective outcomes e.g., ratings of assertiveness, social skilfulness, objective measures of success e.g. obtaining a job, or subjective feelings e.g. distress.
- Overt social behaviour such as the use of micro- and macro-performance skills. These include the frequency, intensity and duration of specific responses, and the sequencing and blending of responses. Micro skills include eye contact and facial expression etc. and macro-skills include refusing an unreasonable request.
- Social-cognitive skills and processes: social perception, social knowledge, social problem-solving, self-monitoring and maladaptive or irrational thoughts, attitudes or beliefs.

D. J. Cohen and Leckman (1994) suggest that difficulties in social and emotional adjustment in individuals with TS have bigger everyday consequences than severity of tic symptomatology. Several studies have found that symptom severity is not positively correlated with socio-emotional maladjustment (De Groot, Janus, & Bornstein, 1995; Edell-Fisher & Motta, 1990; Frank, Sieg, & Gaffney, 1991; Stokes, Bawden, Camfield, Backman, & Dooley, 1991). However, there is also evidence that TS increases children's susceptibility to socio-emotional difficulties e.g., Stokes and colleagues (1991) found that both teachers and peers rated children with TS less favourably, i.e., less popular, more withdrawn, more aggressive, than they rated age- and gender-matched controls. Similarly, Dykens et al. (1990) discovered that parents rated their school-going children with TS as wanting in social adjustment skills.

While many systematic reviews have drawn together findings from studies that have looked at the onset and course of TS and the various pharmacological and behavioural treatments that exist for the syndrome, no review has yet drawn together what is known about the impact of TS on socio-emotional development. As illustrated by the studies above, TS has a far-reaching and pervasive effect on these domains and therefore, the proposed literature review seeks to make sense of them over the lifespan.

Method

Search Strategy

The search strategy utilised the flow diagram outlined in the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement (Moher, Liberati, Tetzlaff, & Altman, 2009; see Figure 1). A systematic literature search was conducted in order to locate published articles concerning the emotional and social impact of Tourette's across the lifespan. Key word searches of articles indexed in the PubMed, APAPsychNet, SCOPUS and Web of Knowledge databases were performed on 24th October 2016. The date range of the search was limited to articles published between 1885 and 24th October 2016; in line with when Giles De La Tourette first described the condition (De La Tourette, 1885). The following search term combinations (from themes in the models described previously) were used to search all databases; tourette* AND social impact OR tourette* AND social outcomes OR tourette* AND social interactions OR tourette* AND social relationships OR tourette* AND social skills

OR tourette* AND emotional impact OR tourette* AND emotional perception OR tourette* AND emotional appraisal OR tourette* AND emotional expression OR tourette* AND emotional facilitation OR tourette* AND emotional regulation.

Selection of Literature

References were imported into Endnote and duplicates were removed. Titles and abstracts were then studied to determine selection for full-text reading. Full texts of selected articles were studied to decide upon eligibility for inclusion.

Inclusion criteria. Studies were included if they met the following criteria:

- Participants had a clinical diagnosis of TS confirmed by a clinician either before or during the study,
- At least one published, psychometrically-robust and standardised measure of emotional and/or social function was administered,
- The study was in English,
- The study was cross-sectional or longitudinal in design, and
- A typically developing or healthy control group comparing the groups on the measures of interest was included.

Exclusion criteria

- Studies that specify neurocognitive function as the *primary* outcome or focus of interest will be excluded.

Inter-rater reliability. Fifteen percent of the title and the abstracts were randomly selected and assessed independently by a second rater. Inter-rater agreement (between the main researcher and the independent second rater) was excellent at 100 percent. Appendix C shows the second reviewer's table.

Data Extraction Plan

The data extracted included the aims of the study, sample characteristics, study design, outcome measures investigating socio-emotional development and main findings relevant to this review.

Quality of Papers

The quality of the papers was assessed using the Newcastle-Ottawa Scale (Wells et al., 2000). Studies were awarded stars for satisfying each of the following criteria: (1) selection of the study groups (i.e., representativeness of the cases, selection of controls and definition of controls for case–control studies), (2) comparability of the groups (i.e., adequate control of confounding factors), (3) Outcome (i.e., valid assessment of outcome). A maximum of 10 stars could be awarded to a study. Only studies with 6 or more stars (medium to good quality) would be included in the final review (e.g., McPheeters et al., 2012).

Synthesis of Results

The selected articles will be discussed under relevant themes described in the Four Branch Model of Emotional Intelligence (Mayer & Salovey, 1997) and the practical model for the assessment of interpersonal problems (Spence, 2007). Under these themes, child and adult studies will be discussed separately.

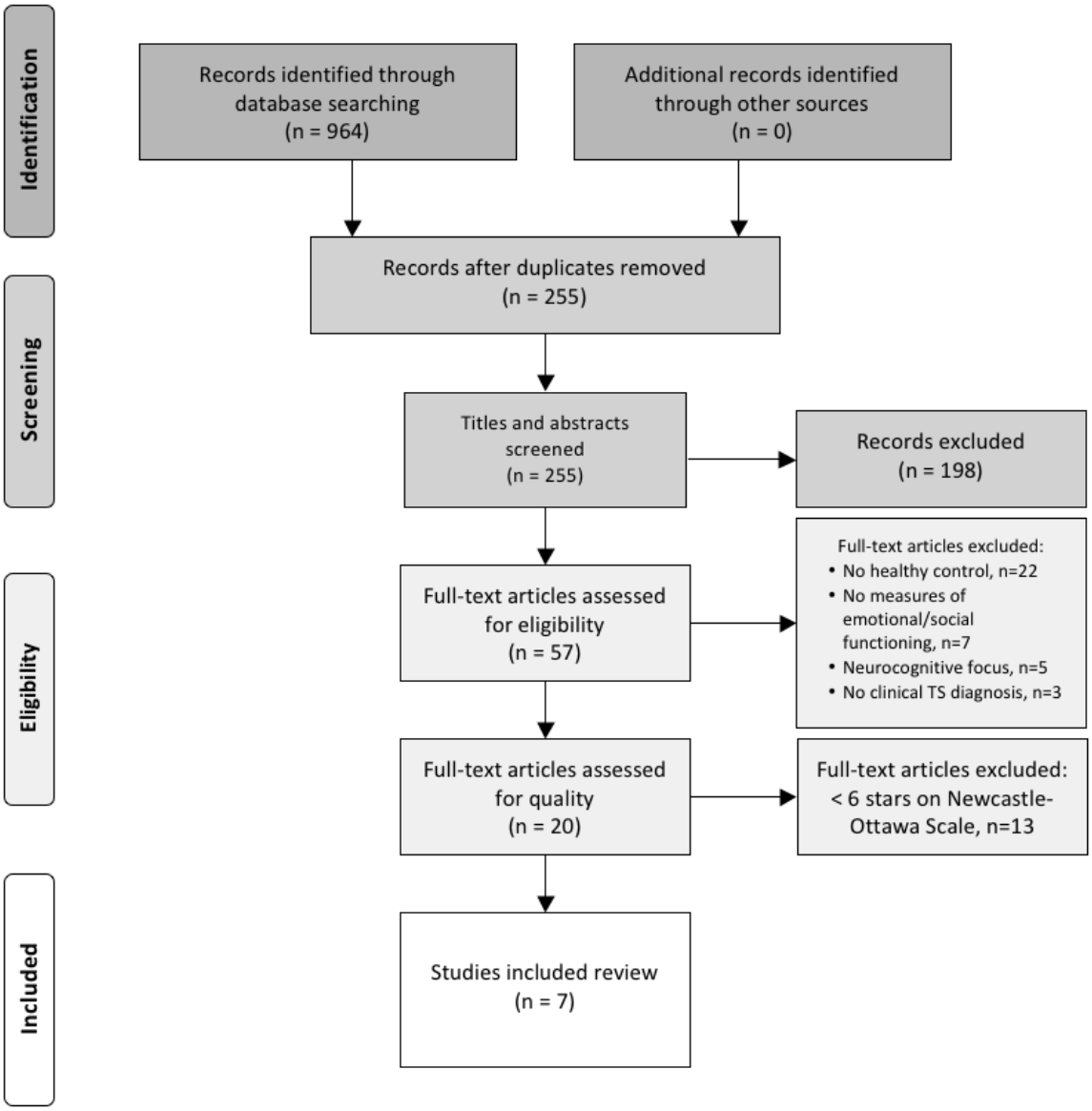

Figure 1. PRISMA diagram for flow of articles through consecutive phases of the literature review.

Table 1

Characteristics of the studies included in the systematic review.

Author(s) (year) (country)	Aims	Sample	Study Design and Measures	Main findings
Hovik, Plessen, Cavanna, Skogli, Andersen, & Øie (2015) (Norway)	Children and adolescents with TS were compared to those with ADHD-combined subtype (ADHD-C) and controls on measures of cognitive-control, focussed-attention and symptom severity.	N= 102 children; Tourette's syndrome: n=19; children with ADHD-C subtype: n=33; Typically Developing Children (TDC): n=50 Mean age: 12.1 years	Cross sectional questionnaire design. The BRIEF-PR (Gioia, Guy, Isquith, & Kenworthy, 1996) was used to compare emotional control between the three groups at baseline and after two years.	1. Children with TS and children with ADHD-C showed more problems with emotional control compared with TDC at both time points. 2. There was a significant interaction effect of group x time for this measure ($F_{(2, 97)} = 3.2$, $p = .043$, $\eta_p^2 = .06$) **(Mixed ANOVA)** 3. There was a main effect for time ($F_{(2, 97)} = 7.6$, $p = .007$, $\eta p^2 = .07$), and a significant main effect for group ($F_{(2, 97)} = 49.8$, $p < .001$, $\eta_p^2 = .51$) **(Mixed ANOVA)** 4. There was a reduction of emotional control problems for the children with TS only but not for those with ADHD-C after two years ($F_{(1, 17)} = 8.5$, $p < .01$, $\eta_p^2 = .33$) **(Repeated measures ANOVA)**

Hoekstra, Lundervold, Gillberg, & Plessen (2013) (Norway)	Children with and without tics were compared on affect and peer difficulties at one time-point (wave 1) and then four years later (wave 2).	n=38 children with tics; n=3847 children without tics	Population-based follow-up study. Proxy-rated SDQ (Goodman, 1999) was administered when the children were 7–9 years (wave 1) and 4 years later (wave 2) to measure emotional symptoms, conduct problems, hyperactivity-inattention problems, peer relationship problems and prosocial behaviour.	1. Children with tics had significantly higher parent- and teacher-rated SDQ total difficulty scores (first 4 subscales) and subscale scores in both waves ($p <$ .001) **(*t* test)** 2. Children with tics experienced an increase in emotional problems and in peer problems between the first and the second wave. 3. Conduct problems in children with tics decreased at a similar rate to controls over 4 years. 4. Children with and without tics were not significantly different for parent-ratings on the prosocial behaviour subscale for wave 1 ($p = .15$) but there was a significant difference 4 years later for wave 2 ($p = .026$)

Cavanna, Selvini, Luoni, Eddy, Ali, Blangiardo, Gagliardi, Balottin, & Termine (2015) (United Kingdom)	Children and adolescents with and without tics were compared on measures of anger expression.	n= 25 children diagnosed with TS; n=41 healthy controls Mean age= 15.4 years (TS); 16.3 years (healthy controls)	Cross sectional questionnaire design. The STAXI (Spielberger, Krasner, & Solomon, 1988) was used to measure the frequency and intensity of anger. The YSR (Achenbach, 1991) was used to assess children's participation in school and social and leisure activities and internalising and externalising behaviours. The CBCL (Achenbach & Edelbrock, 1983), a parent-report questionnaire was used for the evaluation of 6–18 year old children's emotional and behavioural functioning.	1. STAXI scores were not significantly different between patients with TS and controls. 2. Behavioural self-ratings (YSR scores) did not show any significant differences, with the exception of the aggressive behaviour domain of the syndrome scale scores (p = .044). This difference did not reach statistical significance after applying Bonferroni correction **(*t* test)** Most sub-scores of the CBCL (total behavioural, externalising, social, thought and attention problems) were significantly higher (p < .001) for the TS group than controls **(*t* test)**

Storch, Murphy, Chase, Keeley, Goodman, Murray, & Geffken (2007) (USA)	Children with TS were compared to children with Type 1 Diabetes (T1D) and healthy controls on levels of victimisation by peers.	n = 59 children and adolescents diagnosed with TS or a chronic tic disorder; n = 52 children and adolescents diagnosed with T1D; n = 52 healthy children and adolescents Mean age: TS: 11.4 years; T1D: 12.4 years; Healthy controls: 12.3 years	Cross sectional questionnaire design. The SPVS (Schwartz, Farver, Chang, & Lee-Shin, 2002) was used to measure perceived peer victimisation experiences. The CBCL (Achenbach & Edelbrock, 1991) was used to assess parental reports of their child's behavioural and emotional functioning. The ALS (Asher, Hymel, & Renshaw, 1984) was used to assess feelings of loneliness, social adequacy and subjective estimations of peer status.	1. After controlling for gender there were significant group differences in peer victimisation ($F_{(2, 159)} = 3.1$, $p < .05$) (**ANCOVA)** 2. Children with tics reported significantly higher peer victimisation than children with diabetes ($p < .02$) or controls ($p = .05$) **(Planned contrasts)** 3. Modest, positive correlations were found between peer victimisation and loneliness ($r = 0.41$, $p < .01$) **(Pearson's correlation)** 4. Peer victimisation mediates the relationship between tic symptom severity and loneliness ($p < .05$) **(Mediation analysis)**

Carter, O'Donnell, Schultz, Leckman, & Pauls (2000) (USA)	Socio-emotional effectiveness and adaptation in children with TS, children with TS and ADHD (TS+ADHD) and healthy age-matched controls, were explored in this study.	n = 33 children with TS; n = 16 children with TS and ADHD; n = 23 healthy age-matched controls Mean age: 11.1 years (TS); 10.4 years (TS+ADHD); 10.8 years (healthy controls)	Cross sectional questionnaire design. The Vineland-II Scale (Sparrow, Balla, Cicchetti, Harrison, & Doll, 1984) was used to measure personal and social sufficiency. The CBCL (Achenbach & Edelbrock, 1991) was used to measure externalising behaviours.	1. There was a main effect of diagnostic status on social adaptation as measured by the Vineland Social Scale ($F_{(2,67)} = 17.72$; $p < .0001$; $\eta^2 = .364$) **(ANOVA)** 2. There was a main effect of diagnostic status for externalising behaviours as measured by the CBCL ($F_{(2,67)} = 34.52$; $p < .0001$; $\eta^2 = .507$) **(ANOVA)** 3. On both scales, children with TS+ADHD differed significantly from both controls and children with TS alone **(Planned post-hoc comparison)** 4. TS diagnosis significantly predicted parent ratings of child externalising behaviors (measured by the CBCL) ($p < .01$) and parent-rated scores on the Vineland Social Scale ($p < .01$) **(Hierarchical Regression Analysis)**

O'Hare, Helmes, Eapen, Grove, McBain, & Reece (2016) (Australia)	Youth with TS were compared to youth without TS on tic severity, co-occurring conditions, attachment to peers, socio-emotional difficulties and quality of life.	n=86 youth with TS; n= 108 controls Mean age: 11.44 years (TS); 11.3 years (control group)	Survey-based methodology. PedsQL (Varni & Limbers, 2009) was selected to assess health-related quality of life. The study screened for social difficulties using the SDQ (Goodman, 1997). Security of peer attachment was assessed via the AQC (Muris, Meesters, van Melick, & Zwambag, 2001).	1. Youth with TS experienced lower quality of life, increased emotional, behavioural and social difficulties, and elevated rates of insecure peer attachment relative to controls based on combined PedsQL subscale scores ($\wedge$ = .57, $F_{(5, 188)}$ = 27.87, p < .001, η_p^2 = .43) **(MANOVA)**. 2. There were significant between-group differences for social difficulties as measured by combined SDQ subscale scores ($\wedge$ = .42, $F_{(5, 188)}$ = 52.42, p < .001, η_p^2 = .58) **(MANOVA).** 3. Youth with TS were found to experience a higher rate of insecure peer attachment than controls (57 percent reported secure peer attachment, compared with 94 percent of controls, $X^2_{(1, N = 194)}$ = 36.46, *p* < .001. Thirty-eight percent of TS children reported difficulty making friends, compared with 4 percent of the control sample $X^2_{(1, N = 194)}$ = 37.34, *p* < .001) **(Chi-square tests)**.

				4. Insecure attachment was most closely associated with increased psychosocial dysfunction, emotional symptoms and peer relationship problems as assessed by the SDQ ($\wedge$ = .53, $F_{(5, 80)}$ = 14.00, p < .001, η_p^2 = .47) **(MANOVA)**

Dehning, Burger, Krause, Jobst, Müller, Meyer, Zill, and Buchheim (2015) (Germany)	The relationship between attachment and aggression was compared in adults with TS and age-matched controls.	n=53 (adults with TS); n = 54 (healthy controls) Mean age: 33.8 years (TS)	Cross sectional questionnaire design The ECR- R (Fraley, Waller, & Brennan, 2000) was used to assess attachment style. The AQ (Buss & Perry, 1992) was used to measure the different dimensions of the hostility/anger/aggression construct.	1. TS patients had significantly higher ECR-R scores than healthy controls for both relationship anxiety (p < .001) and avoidant attachment style (p = .001) **(ANOVA)** 2. Painful tics were associated with attachment anxiety (p = .017) **(Pearson's correlation)** 3. A feeling of being stigmatised was associated with the ECR-R score for anxiety (p = .015) **(Pearson's correlation)** 4. Patients showed a significantly higher AQ total score than healthy controls (p < .001) **(*t* test)** 5. Patients had significantly higher scores for the dimensions of anger (p = .005) and hostility (p < .001) than healthy controls **(*t* test)** 6. Significant associations were found between the AQ total score and self-injurious behaviour (p = .005), painful tics (p = .021) and

				aggressive thoughts (p = .002) **(Pearson's correlation)** 7. There was a strong relationship between AQ scores and the ECR-R dimension "anxiety" in TS patients (r = 0.55; p < .001) and especially strong for the AQ dimensions of hostility (p < .001) and anger (p = .001) **(Pearson's correlation)**

Note: BRIEF-PR: Behaviour Rating Inventory of Executive Function- Parent Report; CBCL: Child Behaviour Checklist; SDQ; Strengths and Difficulties Questionnaire; STAXI: State-Trait Anger Expression Inventory; YSR: Youth Self-Report; SPVS: Schwartz Peer Victimisation Scale; ALS: Asher Loneliness Scale; Vineland-II: Vineland Adaptive Behavior Scales, Second Edition—Survey Form; PedsQL: Paediatric Quality of Life Inventory; AQC: Attachment Questionnaire for Children; ECR- R: Experiences in Close Relationships-R Scale; AQ: Aggression Questionnaire

Results

This section seeks to synthesise key findings of the studies included in the current review in order to draw together what is known about the impact of TS on socio-emotional development across the lifespan.

Study selection

The initial search identified 964 articles. Duplicates were removed by the first author, resulting in a remaining 255 articles. The abstracts were reviewed by the first author according to the inclusion criteria and 57 articles were retrieved. These were then subjected to a full text review and 37 articles were excluded.

The 20 articles that got through full text screen were subjected to a quality assessment using the Newcastle Ottawa Scale (NOS; Wells et al., 2000) that employed a star rating (Appendix B). Only studies with 6 or more stars (medium to good quality) were included in the final review (e.g. McPheeters et al., 2012). Seven studies met these criteria. The rationale for excluding studies with fewer than 6 stars was based on Lam and Kennedy's (2010) article that suggested the inclusion of poor quality studies reduces the confidence in the final result of a systematic review. In order to review the suitability of making the decision to exclude studies with less than 6 stars, the quality parameters for this review were considered; they included low referral bias, independently validated TS diagnosis, representativeness of cases (therefore reducing selection bias) and use of community controls. The studies excluded on the basis of quality were reviewed and were found to be less robust that the seven studies included, based on these parameters (Appendix B).

The flow of articles through phases of the literature review is summarised in Figure 1.

Description of the Selected Studies

Design of studies. Six out of seven studies in this review used a cross-sectional questionnaire design and one was a population-based follow-up study. All studies had a healthy control group. Two studies were from the USA, two from Norway, and one each from Australia, the United Kingdom and Germany.

Nature of the sample. Participants were children and adults of various age ranges. One study recruited TS patients from a hospital, three from specialist TS clinics. The remaining three studies recruited from a child and adolescent mental health service, schools, and via surveys sent out nationally, respectively.

Evidence from studies included in the review

The articles will be discussed under the broad heading of socio-emotional development. Child and adult studies will be discussed separately and subdivided based on relevant themes described in the Four Branch Model of Emotional Intelligence (Mayer & Salovey, 1997) and in the practical model for the assessment of interpersonal problems (Spence, 2007). For example, the emotional control section relates to the 'reflective regulation of emotions' branch of the emotional intelligence model. Similarly, the social adaptation, social behaviour and social functioning sections pertain to both the 'overt social behaviour' and 'social cognitive skills and processes' component of the Spence model. Finally, the peer relationships section of social functioning corresponds to the 'long-term outcomes' component of the Spence model.

Socio-emotional development

Child studies.

Emotional control. Emotional control is defined as the ability to regulate emotion-related behaviours such as excitement, mood lability and agitation in situations with high emotional salience (Gioia et al., 1996). The BRIEF-PR measure was used to compare emotional control (at one time-point and then two years later) between typically developing children, children with TS alone and children with TS and ADHD in the one study in this review that examined this construct (Hovik et al., 2015).

This study found that children with TS and children with TS and comorbid ADHD showed more difficulties with emotional control compared with typically developing children at both time points. Children with TS, however, displayed a reduction in emotional control problems compared to children with TS and comorbid ADHD after two years.

Social adaptation. One study (Carter et al., 2000) in this review looked at social-emotional functioning and adjustment in children with TS with and without

comorbid ADHD. Parent-rated Vineland II and CBCL scores were used to measure this construct.

Interestingly, this study found that children with TS without comorbid ADHD did not struggle any more than typically developing children in social adaptation. However, the authors found that a TS diagnosis with or without comorbid ADHD predicted poorer parental ratings of externalising behaviour and social adaptation.

Three studies looked at the impact of TS and comorbid ADHD on social and emotional adjustment in children. All studies found a greater incidence of these difficulties when ADHD was present alongside TS (Carter et al., 2000; Hoekstra et al., 2013; Hovik et al., 2015).

Social functioning: Peer relationships. Several standardised measures were employed by the studies in this review to evaluate peer relationships in children with TS. These include the SDQ, the SPVS, the ALS and the AQC.

Three studies in this review looked at peer relationships. All three studies found a significant relationship between peer problems and the presence of tics in children (Hoekstra et al., 2013; O'Hare et al., 2016; Storch, Murphy, et al., 2007).

The Storch et al. (2007) study found that despite children with Type 1 Diabetes engaging in a range of health maintenance behaviours such as dietary control and strict daily medical regimens that are potential targets for teasing by peers, children with tics demonstrated a higher risk for peer victimisation. This study contributed to existing evidence (Shytle et al., 2003) that suggests phonic tics are more detrimental to peer relations than motor tics, albeit the difference between groups was insignificant. In line with previous findings, Storch et al. (2007) also found positive cross-sectional relations between peer victimisation, anxiety, general internalising symptoms and loneliness, and found that peer victimisation mediates the relationship between tic severity and loneliness. The latter finding suggests that clinicians should offer psychosocial interventions to improve interpersonal functioning in addition to any tic-focussed treatments.

O’Hare, Helmes, Eapen, Grove, McBain and Reece (2016) concluded that compared to controls, youth with TS found it more difficult to form and maintain

relationships with peers, and had fewer and less robust friendships. O'Hare et al. (2016) also found positive relations between secure peer attachment, quality of life outcomes and decreased difficulties as measured by the SDQ in young people with TS. Furthermore, problems with peers moderated the physical functioning of youth with TS (O'Hare et al., 2016). This could be the result of youth with TS avoiding activities such as sport at school and in the community as a result of social anxiety and fearing adverse attention from peers.

An effect size comparison in the O'Hare et al. (2016) study revealed that overall quality of life was unfavourably affected by greater severity of tics and poor attachment to peers. The impact of these two factors was worse than that of the presence of co-occurring conditions in children with TS (O'Hare et al., 2016). This result and the findings from the Storch et al. (2007) study that tic severity was not related to child anxiety or internalising symptoms are surprising given the extensive evidence (Coffey et al., 2004; Robertson, Banerjee, Eapen, & Fox-Hiley, 2002) for the incidence of comorbid anxiety and depression in children with TS. The strongest predictive effects reported in the O'Hare et al. (2016) study were for emotional functioning and increased rates of peer difficulties. These studies suggest that having TS places young people at increased risk of insecure peer attachment.

Social behaviour: Aggression, externalising symptoms and conduct problems. Measures employed by studies included in this review that look at aggression and externalising symptoms in children with TS are the STAXI, the YSR and the CBCL. The PedsQL and the SDQ were used to measure conduct problems in the studies included in this review.

Externalising problems can be defined as behaviours directed at other people that include aggressiveness and delinquency or rule-breaking behaviours that suggest an indifference to social norms (Forns, Abad, & Kirchner, 2011). Two studies looked at aggression and externalising symptoms in children with TS (Carter et al., 2000; Cavanna et al., 2015) but only the Cavanna et al. (2015) study found more oppositional and aggressive behaviours in young patients with TS compared to controls. The Carter, O'Donnell, Schultz, Leckman and Pauls (2000) study found that children with TS alone were not significantly different from unaffected controls on externalising behaviours or social adaptation. However, the

presence of a comorbid condition, i.e., ADHD, increased the likelihood of these problems significantly. It must be noted that while the former study used proxy-rated (parents and teachers) measures linked to anger and externalising symptoms the latter used self-report measures: it is possible that parents and teachers viewed these problems as more significant than did the children, contributing to the conflicting findings in these two studies.

Two studies included in this review looked at conduct problems in children with TS (Hoekstra et al., 2013; O'Hare et al., 2016). The longitudinal general population study (Hoekstra et al., 2013) looking at emotional development in children with tics found elevated scores for conduct problems in teacher- and parent-ratings on the SDQ when compared to controls. The study found an increase in peer and emotional difficulties over a four-year time frame in children with tics while the opposite trend was found in the domains of conduct and hyperactivity-inattention, which showed a reduction not unlike what was seen in the control group.

The O'Hare et al. (2016) study found that an improvement in peer attachment was not related to a reduction in conduct problems in children with TS. Aggressive and violent behaviour in children with TS have been found to have a strong detrimental effect on personal and peer relationships (De Lange & Olivier, 2004) and this finding from the O'Hare et al. (2016) study provides further evidence for this.

Social functioning: Prosocial behaviour. The one study (Hoekstra et al., 2013) looking at this construct employed the SDQ as a measure. Children with TS aged 7-9 years did not differ in parent-rated prosocial behaviour compared to their typically developing peers. However, four years later there was a significant difference between the groups with parents of children with TS scoring their children as less prosocial than parents of their counterparts without TS. The authors caution that this difference could in reality be more pronounced but might not have shown up due to the significant attrition rate in this study.

Adult studies.

Social behaviour: Aggression and externalising symptoms. The ECR-R and the AQ were two measures employed in the study exploring externalising symptoms and aggression in adults with TS.

The study (Dehning et al., 2015) that was the first of its kind looked at the relationship between insecure attachment and aggression in adults with TS. It found significantly higher scores of self-reported aggression in adults with TS compared to controls (TS: mean 72.2, SD 19.42; HC: mean 59.8, SD 13.89; $p <$ .001). This study (Dehning et al., 2015) also conjectured that aggressive behaviour and an increase in TS symptomatology are a product of anxious or avoidant attachment styles. Conversely, the authors hypothesised that TS patients who display aggression are stigmatised by society, which in turn leads to relationship difficulties.

Discussion

This review aimed to provide a critical overview and synthesis of the findings of published studies pertaining to the impact of Tourette's syndrome on socio-emotional development across the lifespan. The Four Branch Model of Emotional Intelligence (Mayer & Salovey, 1997) and the practical model for the assessment of interpersonal problems (Spence, 2007) informed the search criteria and the themes under which the findings of the review were illustrated.

The findings of this review appear to suggest that TS promotes an anxious or avoidant attachment style in children with the condition. Symptoms of TS attract unwarranted attention from peers causing difficulties at school, including bullying and problems creating and sustaining friendships. Their inability to regulate emotions in emotive situation e.g., when being bullied, can exacerbate these difficulties. The presence of comorbidities, especially ADHD appears to intensify social adjustment difficulties in children with TS. Comorbidities are also implicated in externalising behaviours and aggression in this cohort; without comorbidities, children with TS appear to display no more aggression than is exhibited by their TS-free peers. Over time, conduct difficulties seem to diminish but emotional difficulties appear to persist. Furthermore, over time children with TS appear to become less prosocial than their peers, according to their parents. Parents and teachers also rate children with TS as more aggressive than children rate themselves. In summary, the impact of TS on socio-emotional development in

children is largely negative with many difficulties worsening over time if symptoms persist.

For adults, attachment difficulties that develop early in life as a consequence of TS appear to have a pervasive impact on the patient's life should the condition persist into adulthood. The evidence suggests that anxious or avoidant attachment styles can aggravate and exacerbate TS symptoms that can invite negative attention from others. In order to counter this attention an individual with TS might react aggressively. This aggressive behaviour leads to negative evaluations or stigma, which consequently has a harmful impact on interpersonal adult relationships.

With respect to the model of emotional intelligence, it appears that children with Tourette's can manage the more basic emotional intelligence processes of perceiving and expressing emotion. However, they appear to struggle with higher order processes that relate to the conscious, reflective regulation of emotion e.g. emotional control. In terms of the Practical Model for the Assessment of Interpersonal Problems (Spence, 2007), children with Tourette's Syndrome struggle with long-term outcomes that pertain to the quality of personal relationships such as friendships. Social skilfulness, a short-term outcome in the model, appears to be another area of deficit in children with Tourette's Syndrome. There appears to be some debate in the literature about social problem solving and self-monitoring i.e., social cognitive skills and processes, as two studies have found conflicting results about externalising symptoms and aggression in children with TS.

It is difficult to comment on how the results of this review for adult studies map onto the two models as only one study came through the quality assessment. However, within the Spence model, the results of this one study suggest that difficulties in one component of the model (overt behaviour such as aggressiveness) can have a lasting impact on long-term outcomes (personal relationships). This study (Dehning et al., 2015) was a recent study and the first of its kind and there is a need for more such good-quality research.

Based on the findings presented in the studies included in the current review, it is clear that there are far reaching repercussions to TS socially,

psychologically and emotionally. However, there is a scarcity of good quality research in this area especially for adults with TS. Compared to the wealth of studies researching socio-emotional development in other neurodevelopmental disorders in children and adults, e.g. in autism (e.g. Gökçen, 2014; Mazefsky, 2013; Stichter, 2012), the literature looking into these constructs for TS is very sparse.

Methodological Issues

Only one out of the seven studies included in this review was a longitudinal study pointing to the lack of more such robust studies in the TS literature.
It is notable that the majority of studies were correlational, meaning causation cannot be inferred, limiting the conclusions that can be drawn.

Many studies used parent- and teacher-report instead of self-report and it is well-documented that parents often misreport their child's internalising symptoms (Achenbach, 1995). Therefore, we cannot exclude a parent- and teacher- induced reporting bias in some of the studies that were reviewed. Also, a variety of measures were employed in examining socio-emotional constructs in TS. This makes it difficult to draw comparisons across studies.

The significant attrition rate of children between the two time-points in the only longitudinal study included in this review (Hoekstra et al., 2013) is a major limitation. Given that children with behavioural difficulties are more likely to dropout in longitudinal studies, the high attrition rate may have impacted the representativeness of the sample. Furthermore, the predominantly Caucasian, middle-class backgrounds of participants may restrict the generalisation of findings to more diverse populations.

One study excluded patients with an ICD-10 diagnosis of a psychiatric co-morbid disorder (Dehning et al., 2015) and all patients in this study were taking medication regularly, which further limits the study results.

Only a modest amount of the variance was explained by the model suggested by Storch et al. (2007) in their study; it must therefore be considered that several other factors besides peer victimisation may influence the association between tic severity and loneliness in children with TS.

Study limitations. A limitation of the current review was the exclusion of studies that did not meet quality criteria, thereby losing the wealth of information contained in them. While McPheeters et al. (2012) suggest that studies receiving six or more stars on the NOS (Wells et al., 2000) are of medium to high quality, we must be cautious to not take this as an immutable rule, and the suitabilty of and rationale for making this decision for each review must be carefully considered.

Due to the paucity of high-quality research in the area, only 7 papers came through to this review. While it is recommended that a quality assessment tool be used, it might have been more prudent to include all papers that met the inclusion and exclusion criteria in the review. The findings from the papers could have then been synthesised giving due note to the quality of the paper when doing so.

As with the inclusion and exclusion criteria stage it would have been ideal if a second rater was used at the quality assessment stage as well. The consequence of not doing this could have resulted in some key papers not coming through to the review and as a consequence information from these papers were not synthesised in the review. This limitation might have had a huge impact on the thoroughness of this review.

The two models used to inform this review were extremely useful in developing search terms and in providing a framework to discuss the findings of this review. However, due to the small number of papers that came through to the review, the findings did not encompass all the themes in these models. In retrospect, maybe a more generic model of social and emotional development could have been chosen to inform this review. Finally, it was a challenging task to draw together findings from studies with a wide range of measures and different approaches.

Research Implications

There is a need for exploratory and intervention studies looking at how TS affects social and emotional development and functioning with a particular focus on how this might play out in early and late adulthood.

O'Hare et al. (2016) have proposed that the findings of their study were

limited by the unavailability of a multidimensional-attachment measure and suggest that future research could develop and use a measure that includes other important attachment relationships.

As only a modest proportion of the variance in the relationship between tic severity and loneliness was explained by peer victimisation, the authors of the Storch et al. (2007) study suggest that future research looks at other factors that mediate and contribute to this relationship. They also suggest that facets of peer relationships other than victimisation could be explored to get a more rounded understanding of this experience for children with TS.

Clinical Implications

The factors considered in the current review are important in identifying risk factors, mediators and moderators of TS in children and adults. Furthermore, findings offer key implications for assessment, formulation and treatment for patients with TS.

It is of concern that the literature on the impact of TS on socio-emotional development across the lifespan is so sparse; this is especially the case for adults and older adults. This has serious clinical implications in that clinicians do not have proven models of working with social adaptation and functioning for these groups.

The Carter et al. (2000) study and that of Bawden et al. (1998) suggest that interventions should focus on enhancing positive peer relationships in children with TS. Schools could provide this via peer education programmes targeting stigma and through social skills training for groups and individuals.

Hoekstra et al. (2013) highlight that TS in school-aged children is associated with risk of developing emotional and peer difficulties that often get worse over time. A study by Woods (2005) has demonstrated encouraging initial results for an educational intervention that targets unhelpful peer attitudes and behaviours.

Cavanna et al. (2015) found that even in the absence of comorbidities, patients with TS are prone to develop anger problems. The various forms that anger might take, such as impulsivity and irritability, need to be taken into account

in assessment, formulation and treatment. The authors go on to suggest that the identification and treatment of anger in TS would benefit from diagnostic and outcome measures specific to this cohort.

Storch, Murphy, et al. (2007) suggest that treatment for interpersonal difficulties should include psychosocial interventions e.g. social skills training for children to help them initiate positive interactions and navigate negative peer interactions. Coaching is also suggested as method to help children suppress tics in social situations such as school, with a view to lessen the probability of bullying. Treatments such as Habit Reversal Therapy can reduce tic severity (Deckersbach, Rauch, Buhlmann, & Wilhelm, 2006; Woods, Wetterneck, & Flessner, 2006) and consequently this can reduce negative attention from peers.

Findings of the Dehning et al. (2015) study suggest that early attachment patterns can play out in current relationships in adults with TS. The authors suggest that this could be explored if clients with TS present with difficulty managing anger in personal relationships.

Conclusions

This review synthesised literature relating to the impact of TS on socio-emotional development across the lifespan. Research appears to be proceeding in terms of examining various constructs that have been demonstrated to have a close link with TS. Studies in all areas show promise, particularly those relating to attachment and peer relationships. Longitudinal research examining these and other important socio-emotional features of TS is however in its infancy, especially for adults and older adults. Further research seeking to replicate findings and test explanatory models is necessary.

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An evaluation of a tailored training program on the early-detection of ultra-high risk for a first episode of psychosis, provided by the Bath and North East Somerset Early Intervention in Psychosis Service

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Proposed journal: Psychosis: Psychological, Social and Integrative Approaches. *This journal was selected as it publishes peer-reviewed papers discussing training and knowledge of mental health professionals in psychological and psychosocial interventions in the treatment and prevention of psychosis (Appendix D)*

Introduction

Background

The National Institute for Health and Care Excellence guidelines (NICE; 2014) highlight that Early Intervention in Psychosis (EIP) Services could improve clinical outcomes such as admission rates, symptoms and relapse, for people with a first episode of psychosis (FEP). This could be achieved through the provision of "a full range of evidence-based treatment including pharmacological, psychological, social, occupational, and educational interventions" (NICE, 2014, p. 15). The guidelines also suggest that "treatment from these services should be accessed as soon as possible to reduce the duration of untreated psychosis" (DUP; 2014, p. 15).

French, Shiers and Jones (2014, p. 1) suggest there to be "overwhelming evidence for the benefits of intervening early in the illness". The benefits potentially include that over half of those beginning treatment early eventually secure a job (Killackey, Jackson, & McGorry, 2008), a reduction in the risk of suicide by fifty per cent (Power, 2004), and that intervening early can postpone or even inhibit the start of a distressing and stigmatising disorder (Van Der Gaag et al., 2013). This highlights the vital importance of the early detection of psychosis, with there being a need to ensure staff are trained to do this effectively (Tiffin & Glover, 2007).

Psychosis Awareness Training for Third Sector Professionals

Third sector (e.g. voluntary) organisations play an important role in the provision of services for individuals experiencing psychosis (Department of Health, 2004; Lester et al., 2008). A recent study, aimed at reducing the delay in referral to an EIP team, found a significant increase in the number of cases of FEP referred to the EIP team post-intervention (Malla et al., 2014). This study used a quasi-experimental design and was made up of three parts: pre-intervention, intervention and post-intervention phases. During the first phase, information was sent to primary care (health and social services community clinics) and all mental health services in the catchment area about the kind of service provided, its open referral procedure, easy access and eligibility criteria. The intervention phase involved training about FEP, focussing on the prodromal phase and the benefits of expert early intervention. This training was provided to professionals in all primary health, educational services, accident and emergency, and mental health services in the catchment area. The study found that the intervention did not improve DUP

for clients referred from community services, and the most popular route to the EIP team remained via hospital. To quote the authors, “it is possible that community services, which see a wide array of social and generic mental health problems, were unable to capture the nuances of knowledge from the educational intervention that may be necessary to identify a case of psychosis and/or failed to incorporate this knowledge into their daily practice” (p.1716). A limitation of this study is perhaps that post-training support and supervision was not provided as part of the study design.

Bechard-Evans et al. (2007) considered the relationship between help-seeking and referral components of DUP and predictor variables including level of symptoms, type of first and total number of mental health contacts before and after the onset of psychosis in a sample of 98 FEP clients. The authors concluded that when non-health community workers were involved in making referrals to the EIP team, there was a longer DUP. Another study suggested the role of third-sector staff in the process of referral to EIP teams is not completely clear (Lloyd-Evans et al., 2015). Given this lack of clarity, it would appear important to consider the development of training, in line with the recommendations of NICE (2014), that aims to increase third sector organisations’ confidence and knowledge in relation to identifying and making referrals to EIP teams.

Potential Benefits and Barriers to Training

The usefulness of training in psychosis for improving the knowledge and confidence of staff is evidenced by a recent study completed in Ireland (Sutton et al., 2017). This study used a quasi-experimental pre- and post-intervention design to consider the feasibility of providing an information intervention designed to improve participants’ mental health literacy and confidence in providing help to people with psychosis. A Psychosis Information and Confidence Questionnaire was completed pre- and post-intervention by 755 participants. The professionals’ knowledge of psychosis, ability to recognise signs and symptoms of psychosis, awareness of how to access services and confidence in providing help to people experiencing psychosis improved significantly as a consequence of this intervention (Sutton et al., 2007).

Before designing and offering training it is important to consider potential barriers experienced by third sector professionals when asking about psychosis or

in making referrals to mental health teams. Tanskanen et al. (2011) found challenges such as an inability to identify symptoms, fear that getting involved might not be what is expected of their job role and an inclination to wait and see what might happen were common amongst community staff. This in turn kept community workers from enabling people to access the EIP team. These challenges are surmountable and with community workers highlighted as more likely to have already built trusting relationships with young people with at-risk mental state (Lloyd-Evans et al., 2015), they are ideally positioned to notice any changes in the young person. The authors therefore suggest that offering targeted training and teaching programmes in psychosis to community staff can improve referral pathways to EIP teams and reduce DUP (Tanskanen et al., 2011).

The At-Risk Mental State

The ultra-high risk criteria (Yung et al., 2003), which is the operationalisation of the At-risk mental state (ARMS) for psychosis, includes (1) age: adolescence to young adulthood poses the highest risk for onset of a psychotic disorder, (2) attenuated psychotic features, and/or (3) Brief Limited Intermittent Psychotic Symptoms (BLIPS) and/or, (4) family history of psychotic disorder in a first-degree relative *plus* evidence of deterioration i.e., significant decline in functioning.

As with any newly developed criteria, there is a risk for overdiagnosis of the ARMS (Moynihan, Doust, & Henry, 2012; Welsh, 2013) or the pathologising of what could be normal human experience, which could lead to wasted resources and create unnecessary anxiety in patients who are told they are “at-risk” for developing psychosis. However, studies have shown that with proper training (Welsh, 2013; Welsh & Tiffin, 2012), robust screening tools (Kline & Schiffman, 2014; Savill, D'Ambrosio, Cannon, & Loewy, 2017) and a treatment approach that is initially psychosocial rather than medical (Welsh, Mediavilla, & Tiffin, 2011) overdiagnosis and its unpleasant consequences can be prevented.

Service Context

Avon and Wiltshire Mental Health Partnership NHS Trust (AWP) is a significant provider of high quality mental health services across a core catchment area covering Bath and North East Somerset (BANES), Bristol, North Somerset, South Gloucestershire, Swindon and Wiltshire. Within AWP, the BANES EIP team

is a multidisciplinary community mental health team that assesses and treats people (aged 14 and over) with a FEP within two weeks of referral. The team provides a full range of pharmacological, psychological, social, occupational and educational interventions for people with psychosis.

Rationale for the Current Project

The aforementioned recent research and guidance emphasises the need for early detection and shorter DUP in the management and treatment of FEP. Given the literature highlighting how ideally placed third sector mental health professionals are in identifying the prodromal symptoms of psychosis, it is essential that robust training programmes are developed for and delivered to these professionals. The AWP EIP team in BANES requested an evaluation of their newly developed training package that combined locally developed psychosis awareness training with training in at-risk mental state developed in Birmingham to facilitate the development of the links between the EIP team and local youth services. This training was developed for purpose and had not been delivered previously in its current form; it was therefore important that the training was evaluated.

The aims of this project were to evaluate and recommend improvements to a training package provided by the BANES EIP team that was delivered with the intention of improving third sector professionals' knowledge and confidence in identifying and referring people at ultra-high risk of developing psychosis. The service improvement project questions are listed in Table 1.

Table 1

Service Improvement Project Questions

Question 1	Does the training increase the number of referrals made to the BANES EIP team from the third sector provider that received the training?
Question 2	Does the early-detection training package increase staff's knowledge and confidence in detecting young people at ultra-high risk of developing psychosis and of the referral pathway for the BANES EIP team?
Question 3	What were the hopes and experiences of the staff receiving the training? In what ways can the training package be improved to address any additional needs?
Question 4	How well was the post-training consultation utilised, and what are the barriers to accessing this?

Method

This project replicated the methodology used in two service improvement projects (Robinson, 2016; Walters, Hogg, & Gillmore, 2016) that were submitted in partial completion of the Doctorate in Clinical Psychology at the University of Bath. This project was approved by the University of Bath Research Ethics Committee (Reference: 16-168) and the trust R&D office (AWP reference: E2016.019) (Appendix E).

Design

A longitudinal design was used to explore the number of clients with psychosis on caseloads, and staff's knowledge and confidence ratings of psychosis and of making referrals to the BANES EIP team. Additionally, open-ended questions seeking feedback on staff's hopes, personal barriers, what was helpful and what could be improved in future rounds of the training was collected. Due to the expectation that responses to the open-ended questions on the questionnaires would be brief, formal qualitative analysis was not planned. This decision is in line with other evaluation studies (e.g., Center for Health Policy and Research, 2007; Nadeem, Cappella, Holland, Coccaro, & Crisonino, 2016).

Participants

All members of the teams at the third sector organisations, Project 28 and Options for Living, were informed about the training and the project by the BANES EIP team and invited to participate (see study information sheet in Appendix F).

Procedure

The Institute for Healthcare Improvement's (2009) Model for Improvement was employed in executing this project. Figure 1 depicts the 'Plan, Study, Do, Act' cycle and Table 2 describes how this project followed the stages in the model. The Model for Improvement asks the following questions: what are we trying to accomplish, how will we know that a change is an improvement and what change can we make that will result in improvement?

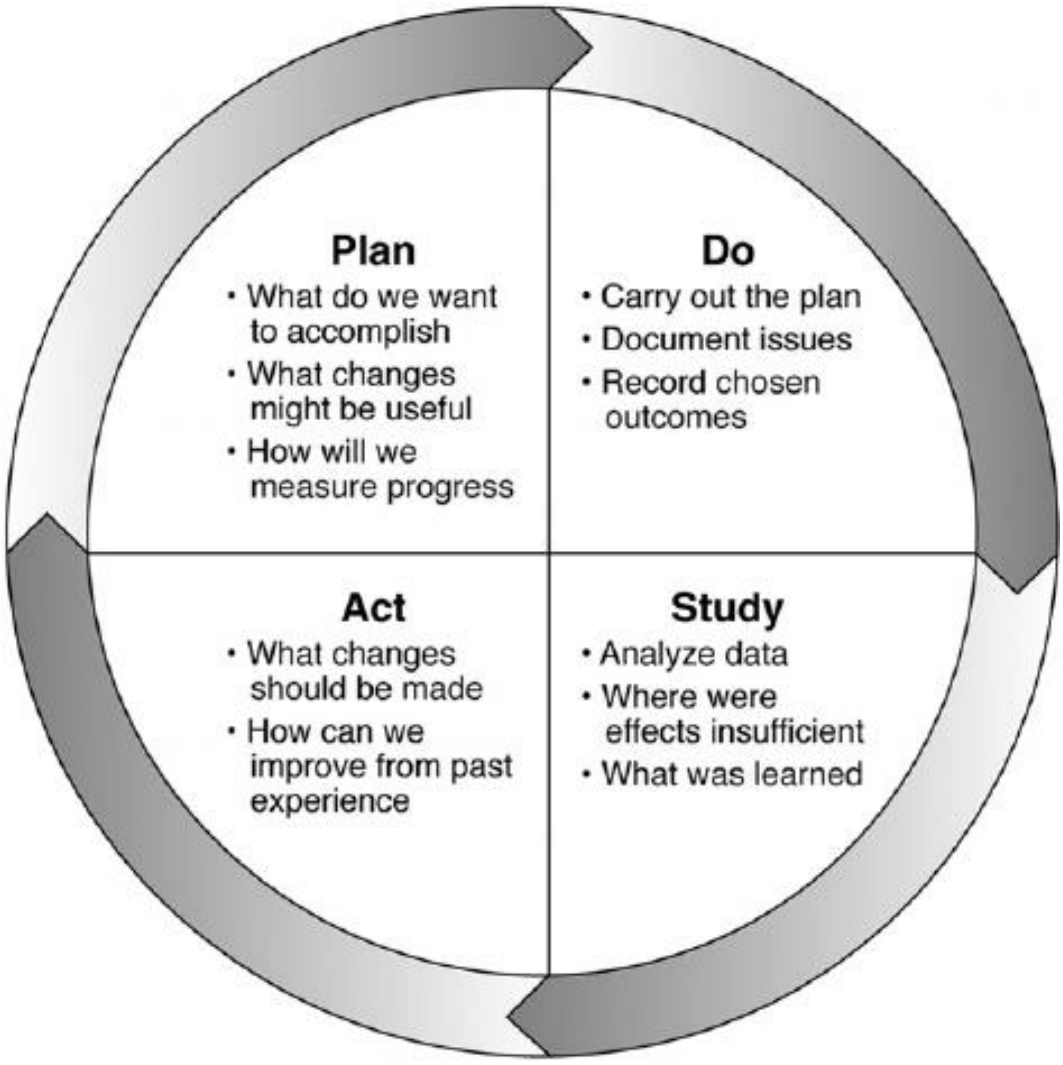

Figure 1. The PDSA cycle (Institute for Healthcare Improvement, 2009)

Table 2

Practical application of PDSA model in current project.

Stage in model	Practical application of stage
Plan	1. Review of relevant literature, 2. Consultation with a regional collaborator (a member of the EIP team, 3. Consultation with team members, including management, and 4. Development of the pre-, post-, and follow-up questionnaires in consultation with EIP team members.
Do	Development and delivery of new training package by Specialist Early Intervention Practitioners from the BANES EIP team.
Study	1. Administration of pre- and post- training questionnaires, 2. Administration of follow-up questionnaires three months after training, 3. Impact of the training programme was measured through change in scores on knowledge and confidence at pre- and post-training and at follow-up, and 4. Follow-up data was used to assess change in practice, knowledge and confidence after the opportunity to implement skills acquired at training, and 5. Perceived barriers to implementing change were explored through open-ended questions.
Act	1. Recommendations from this project, made in light of project findings and participant feedback and in consultation with the EIP team, will be used to modify the training package, and 2. A further cycle of Plan-Do-Study-Act will be needed to see if the modified programme meets the training needs of future participants.

Details of the training package. The new training package is a one-session, two-hour long training that combined the locally developed psychosis awareness training (Wilde & Phelps, 2015) and training on At-Risk Mental State (ARMS; Patterson, 2009) in order to help professionals with the early detection of psychosis. The initial psychosis awareness training was developed to improve awareness of psychosis and early intervention, with some mention of prodromal symptoms. Members of the ED:IT (Early Detection and Intervention Team) in Birmingham (Patterson, 2009) developed the ARMS-specific training for professionals with a view to educating professionals on the rationale for early detection (details in Table 3).

Table 3

Training components

Training component	Description
PAT component	• Defining psychosis, its causes, symptoms and course, • Discussing the impact of psychosis, • Introducing the role of early intervention, • Introducing types of interventions, and • Signposting to services and resources.
ARMS component	• Discussion of the rationale for early detection, • Describing what an "at-risk" client looks like, • Presenting data from the European Prediction of Psychosis Study [EPOS; (Ruhrmann et al., 2010)], • Discussing stigma in the context of psychosis, • Explaining the development of a service approach to early detection, and • Explaining how this approach works in practice.
Consultation component (optional)	• Offering consultation once a month to participating teams, • Providing on-going consultation, and • Providing support to staff and supervision on complex cases.

Questionnaires. Three questionnaires (pre- and post-training and follow-up) based on the questionnaires used by Walters et al. (2016) and Robinson (2016) were adapted for the purpose of this study and employed both closed- and open-ended questions (see Appendix G). They assessed current working patterns with clients experiencing psychosis and perceptions of personal barriers to working more directly with psychosis. Questions were further subdivided into the following categories:

1. Knowledge about psychosis including questions such as "I would know how to recognise the symptoms of psychosis in a client" and "I understand what 'at-risk' mental state means."
2. Confidence in knowing how to ask about psychosis, including questions such as "If I suspected that a client was experiencing the symptoms of psychosis, I would know how to ask about it."

Responses were rated on a Likert scale ranging from 0 = strongly agree to 4 = strongly disagree. Questionnaires were administered at three time points, pre-

training (immediately before), post-training (immediately after) and at three-month follow-up.

Twenty-seven core members of staff representing all disciplines (team leaders, transition workers, substance misuse workers, social prescribers, outreach and support workers) completed the training and the pre- and post-training questionnaires. Twenty-three out of the twenty-seven completed the follow-up measures three-months after training. The pre- and post- questionnaires for one participant who completed the follow-up questionnaires were not handed in, and their data was therefore not included in the analyses. Consequently, only data from the 22 participants completing measures at all three time-points were analysed.

Analysis

The advice of a statistician was sought when planning the analysis strategy. As the quantitative data met assumptions of normality and sphericity, parametric tests were feasible. Quantitative data from the questionnaires regarding knowledge and confidence of psychosis and referral to the EIP team was analysed using a repeated measures analysis of variance. *T* tests were used to compare the number of clients on caseloads who were asked about psychosis, and number of clients referred to the BANES EIP service before training, with numbers reported at follow-up. Feedback from the open-ended questions about hopes for the training, barriers, confidence in working with psychosis, helpful aspects of the training package, uptake and usefulness of optional on-going consultation etc. were summarised.

Results

The characteristics of the sample will be described, followed by results organised under the service improvement questions posed earlier (Table 1).

Characteristics of the Sample

Twenty-six people took part in the training and 22 (85 percent) completed pre-, post- and follow-up questionnaires. The demographic data of the participants is summarised in Table 4.

Table 4

Participant demographic data

Descriptives	Number (percentage)
Gender	
Female	13 (59.1)
Male	9 (40.9)
Role within service	
Support worker	14 (63.63)
Substance misuse worker	2 (9.09)
Transitions worker	1 (4.55)
Team leader	2 (9.09)
Manager	2 (9.09)
Unknown role	1 (4.55)

Question 1: Number of Referrals

Categorical data was collected at pre-training and at follow-up for the number of clients on the caseload who were asked about psychosis and for clients referred to the EIP team. In order to compare pre-training and follow-up data the categorical data was transformed into ordinal data and paired *t* tests were run. There was no significant difference in the number of clients asked about psychosis before training was delivered (M = 1.5, SD= 0.74) compared to follow up (M = 1.4, SD = 1.05); $t_{(14)} = .367$, $p = .719$. There was also no significant difference in the number of clients referred to the EIP team before training was delivered (M = 1.3, SD = 0.96) compared to follow up (M = 1.2, SD = 0.94); $t_{(17)} = .169$, $p = .868$. It must, however, be noted that the paired samples *t* test lost some sensitivity due to the conversion of data from categorical to ordinal.

It is important to note that when inspecting this data visually, there was a non-significant increase in the number of staff asking their clients about psychosis from pre-training (n = 15, 68.2%) to follow-up (n = 21, 95.5%). A similar visual

inspection of the change in data for number of referrals to the EIP team from pre-training to follow-up indicates no change in the number of staff making referrals to the EIP team (i.e., 90.9% at both time points).

Question 2: Knowledge and Confidence

Total knowledge and confidence scores from pre- and post- training and follow-up were calculated by summing up the scores of individual participants (Appendix H) for the six knowledge items and the two confidence items for each of the three questionnaires (see Figures 2 and 3 for graph of mean of scores).

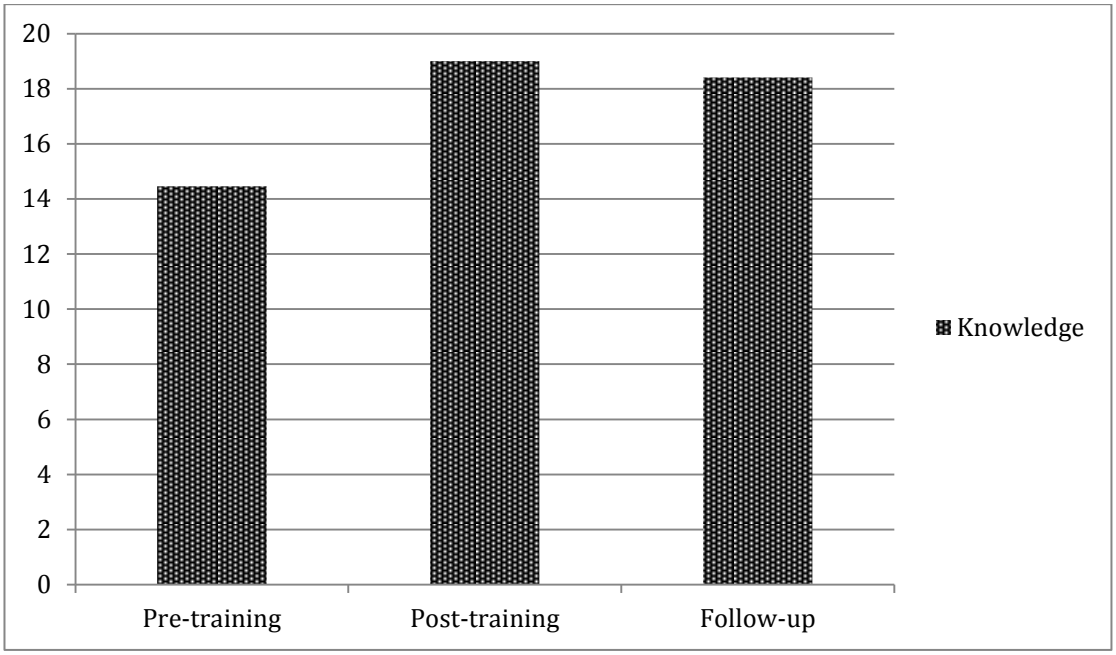

Figure 2. The effect of training on knowledge

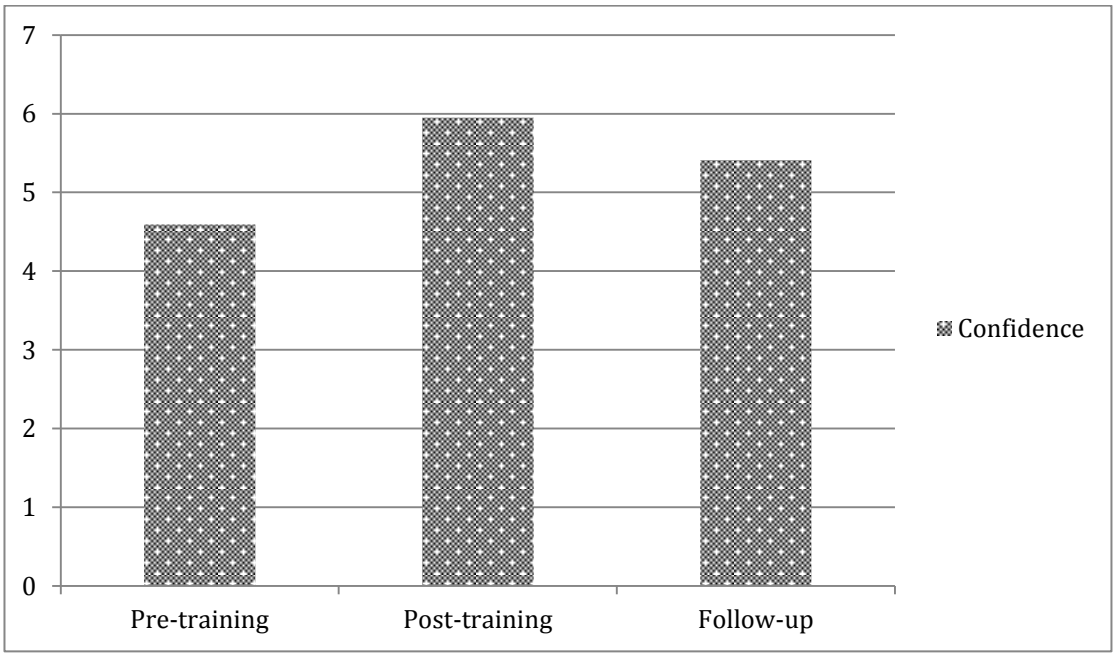

Figure 3. The effect of training on confidence

Data were tested for normality using the Shapiro-Wilk's test and was found to be non-significant for all variables other than the total confidence score at follow-up (p = .028). However, when z scores were worked out for skewness and kurtosis, they were all between ± 1.96 indicating that the data did not deviate significantly from the normal curve (Field, 2013). Visual inspection of the histogram for this variable also indicated that the data did not deviate from the normal distribution significantly (see Appendix I for normality tests). Mauchly's Test of Sphericity indicated that the assumption of sphericity was not violated for knowledge ($X^2_{(2)}$ = 3.630, p = .163) or for confidence scores ($X^2_{(2)}$ = 0.217, p = .897).

As the assumptions of normality and sphericity were not violated, parametric tests were used to analyse the knowledge and confidence data. A repeated measures ANOVA was conducted to compare the difference between pre-, post- and follow-up knowledge and confidence scores. The results show that there was a significant difference between the scores for knowledge, $F_{(2,42)}$ = 21.49, p = < .001 and for confidence, $F_{(2,42)}$ = 18.18, p = < .001.

Three paired samples t-tests were used to make post hoc comparisons between the three sets of knowledge scores (see Table 5). A first paired samples t-test indicated that there was a significant difference in the scores for pre-training and (M = 14.4, SD = 3.75) post-training (M = 19.0, SD = 3.15) knowledge scores; $t_{(21)}$ = -5.083, p < .001. A second paired samples t-test indicated that there was no significant difference in the scores for post-training (M = 19.0, SD = 3.15) and follow-up (M = 18.4, SD = 2.73) knowledge scores; $t_{(21)}$ = 0.886, p = .385. A third paired samples t-test indicated that there was a significant difference in the scores for follow-up (M = 18.4, SD = 2.73) and pre-training (M = 14.4, SD = 3.75) knowledge scores; $t_{(21)}$ = 5.825, p < .001. These results suggest participants' knowledge of psychosis improved immediately after training was delivered. Furthermore, knowledge of psychosis did not reduce in the three months following training i.e., gains in knowledge as a consequence of training were maintained.

Similarly, three paired samples t-tests were used to make post hoc comparisons between the three sets of confidence scores (see Table 5). A first paired samples t-test indicated that there was a significant difference in the scores for pre-training and (M = 4.6, SD = 1.44) post-training (M = 5.9, SD = 1.04)

confidence scores; $t_{(21)} = -5.851$, $p < .001$. A second paired samples *t*-test indicated that there was a significant difference in the scores for post-training (M = 5.9, SD = 1.04) and follow-up (M = 5.4, SD = 1.18) confidence scores; $t_{(21)} = 2.531$, $p = .019$. A third paired samples *t*-test indicated that there was a significant difference in the scores for follow-up (M = 5.4, SD = 1.18) and pre-training (M = 4.6, SD = 1.44) confidence scores; $t_{(21)} = 3.498$, $p = .002$. These results suggest that training improved the confidence of staff in working with clients with psychosis immediately after training was delivered. However, there was a slight drop in confidence in working with clients with psychosis three months following the delivery of training.

This quantitative data was corroborated by the high percentage of positive responses to the questions asked post-training: “Has the training helped you become more confident in working with psychosis?” (n = 22, 100%) and at follow-up: “Has the training helped you become more confident in identifying the signs of psychosis?” (n = 20, 86.4%).

Table 5
Descriptive statistics and results of paired t tests for knowledge and confidence scores

	Total knowledge score			Total confidence score		
	Pre training	Post training	Follow up	Pre training	Post training	Follow up
N	22	22	22	22	22	22
M	14.4^{a}	19.0^{b}	18.40^{b}	4.6^{x}	5.9^{y}	5.4^{z}
SD	3.75	3.15	2.74	1.44	1.04	1.18

Note: Statistics sharing a superscript are not significantly different from each other at $p < .05$; N= number; M=mean; SD= standard deviation

Question 3: Staff Experience and Suggested Improvements

- *What are staff's hopes for this training session?*
    - An increase in knowledge of early warning signs of psychosis (14 of 22 staff)
    - An increase in knowledge of the services available to clients (1 of 22 staff)
    - An increase in knowledge of the procedure for escalating concerns and making referrals to the BANES EIP Service (3 of 22 staff)
    - An increase in confidence in supporting a client with symptoms and in approaching or promoting a conversation about psychosis (7 of 22 staff)
    - Supplementing theoretical knowledge with practical experiences (1 of 22 staff)
    - A refresher on psychosis (1 of 22 staff)
    - Learn about new developments in psychosis research (1 of 22 staff)

- *What are staff's personal barriers to asking their clients about psychosis?*
    - A lack of knowledge of what questions should be asked when assessing for early warning signs of psychosis (4 of 22 staff)
    - An incomplete understanding of the signs of psychosis (2 of 22 staff)
    - Fear of embarrassing young clients as a consequence of previous experiences where clients found it difficult to engage in conversations about their mental health (1 of 22 staff)
    - Fear of isolating clients (1 of 22 staff)
    - Fear of damaging current working relationship (1 of 22 staff)
    - Fear of making things worse for the client (1 of 22 staff)
    - A lack of confidence and experience (4 of 22 staff)

- *What has helped staff become more confident in working with psychosis?*
    - Learning how to discuss psychosis with young clients and how to manage these discussions (4 of 22 staff)
    - Understanding how the BANES EIP team operates (2 of 22 staff)
    - The practical exercise into the experience of psychosis (Appendix J) (1 of 22 staff)
    - An increase in knowledge of the signs of psychosis (11 of 22 staff)

- *What do staff feel has been the most helpful aspect of this training for work with clients?*
  - The voices exercise (Appendix J) (1 of 22 staff)
  - Hearing about the experiences of a person with personal experience (PPE) (3 of 22 staff)
  - The format of the training that promoted an open discussion (1 of 22 staff)
  - The content of the training, which was described as interesting and informative (1 of 22 staff)
  - Facilitation of understanding of the signs and symptoms of psychosis (7 of 22 staff)
  - Learning about how the BANES EIP team works (3 of 22 staff)

- *Are there any aspects of the training that could be improved?*
  - The format of the training was haphazard largely because of the number of people involved in delivering it (1 of 22 staff)

Question 4: The Consultation Component

Figure 4 depicts the responses of staff (N=22) when asked if they would be interested in the optional consultation component offered by the EIP team and Figure 5 summarises the number of staff who actually took up this optional component at follow-up.

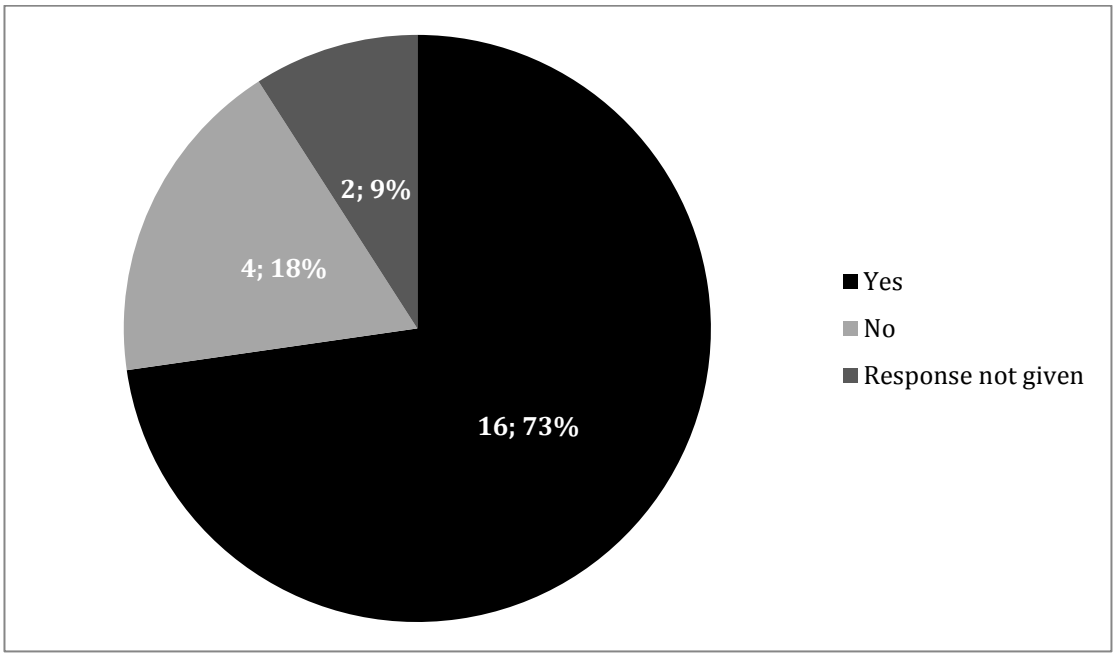

Figure 4. Interest at post-training in optional on-going consultation component

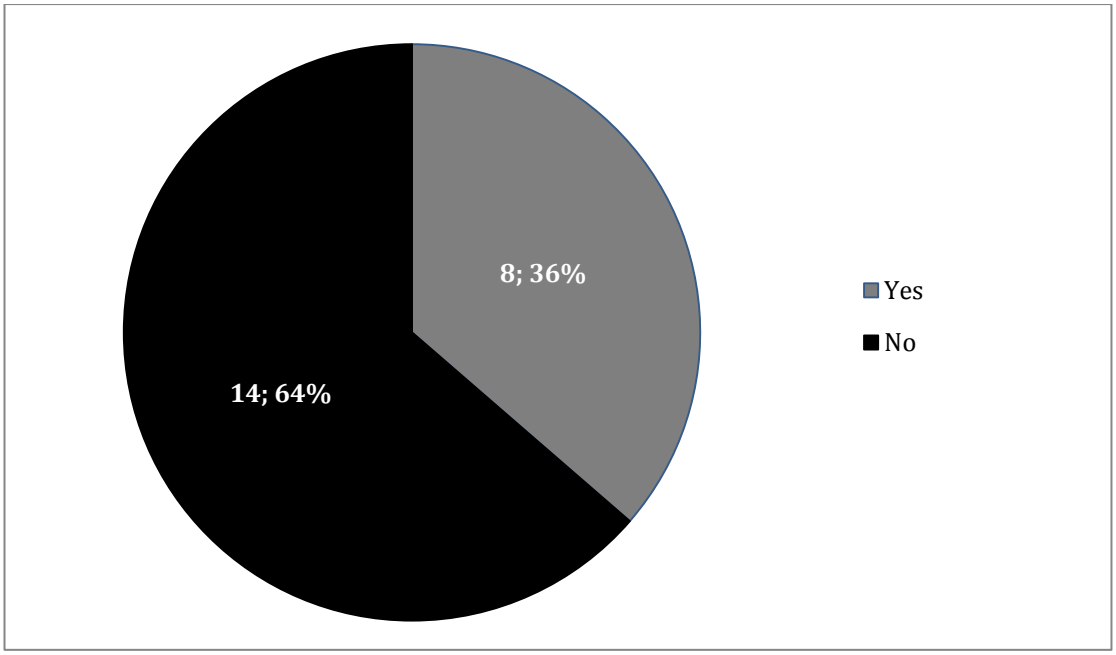

Figure 5. Uptake of on-going consultation component at three-month follow-up

- *What did staff find helpful about the optional consultation component?*
  - It facilitated the making of effective referrals, as staff were able to discuss clients with a mental health worker beforehand (1 of 22 staff)
  - It facilitated regular contact with a member of the EIP team for discussion of complex cases (2 of 22 staff)
  - It was a source of general information regarding psychosis (1 of 22 staff)
  - It served as a refresher (1 of 22 staff)

- *What were the barriers to using the consultation?*
  - Not aware that the component had been offered (2 of 22 staff)
  - Not sure what the component involved (1 of 22 staff)
  - Not needed to use the component yet as they have either not had a client with psychosis or not encountered a complex case (8 of 22 staff)

- *What would help staff to access the optional consultation?*
  - A clear understanding of what the consultation component involved (2 of 22 staff)
  - Guidance from the management at their own organisations before accessing the consultation (2 of 22 staff)
  - A leaflet, website, or a number they could call to find out about the consultation (2 of 22 staff)
  - Continued, regular meetings with the EIP team would help in accessing this component (1 of 22 staff)

Discussion

This project aimed to evaluate the impact of training provided by the BANES EIP team to professionals working in the third sector, with a view to make recommendations for improving the training package for future use. A cross-sectional design was used in this evaluation and the Model for Improvement (Institute for Healthcare Improvement, 2009) was followed in executing this service improvement project.

Early intervention in psychosis has several benefits including reducing suicide risk, improving quality of life and at times preventing the start of a debilitating disorder (Killackey et al., 2008; Power, 2004; Van Der Gaag et al., 2013). Despite fostering trusting relationships and being well-placed for engagement with young people at risk of developing psychosis, the involvement of community staff in making referrals to EIP teams has not reduced DUP (Bechard-Evans et al., 2007; Lloyd-Evans et al., 2015; Malla et al., 2014). There is, however, evidence that training that addresses potential barriers to making timely referrals can increase staff's knowledge and confidence in addressing psychosis (Tanskanen et al., 2011). Subsequently, these targeted training packages could improve referral pathways and consequently reduce DUP.

Impact of Training

The findings suggest that the training improved staff's knowledge of the early warning signs of psychosis and of the referral process to the EIP team, and improved staff's confidence in talking to clients about psychosis and in making referrals to the EIP team.

Despite an increase in the number of staff who asked their clients about psychosis from pre-training to follow-up, the training did not significantly increase the number of clients asked about psychosis or number of referrals made to the BANES EIP team between these two time-points.

Service Implications and Recommendations

Recommendations were made to the service based on the quantitative results and qualitative feedback from this project.

1. It will be important for the EIP team to continue providing the training, as it had a significant impact on staff knowledge and confidence.
2. Although knowledge and confidence improved, a further recommendation would be for the BANES EIP team to review the content of the training to see if any changes need to be made in light of the absence of new referrals from the target organisations. Is there a disconnection between having the knowledge and engaging in the behaviour of making a referral? Does future work need to focus on how to increase the behaviour of making a referral?
3. The EIP team could encourage the organisations to maintain a training rota that highlights staff that are yet to attend training so they can be prioritised for future training.
4. Top-up training would also be useful in addressing the potential drop in confidence in the months following the training and to ensure new staff to the services can access the training on an on-going basis.
5. The drop in confidence and the non-significant increase in referral rates from post-training to follow-up might also be addressed by emphasising the availability of the optional consultation component at the training day.
6. It might be useful to outline the specifics of what would be offered as part of the consultation component e.g., consultation on complex cases, supervision, help in making referrals etc.
7. It would also be useful if organisations could be reminded of the consultation component at regular intervals.
8. The involvement of a person with personal experience (PPE) was highly valued by the staff that received the training. However, the PPE was present only at the training for Options for Living and not at Project 28. As PPE involvement is such a valued part of the training, it would be useful for this to be consistent within the training package provided by the BANES

EIP team with training dates set enough in advance to maximise the possibility of PPE involvement.

9. If the PPE involvement was voluntary, the service could look into reimbursing the PPE for their input into future rounds of this training.
10. The training package combined training on psychosis awareness (developed by the BANES EIP team) and training on At-Risk Mental State (ARMS; Patterson, 2009) in order to help professionals with the early detection of the symptoms of psychosis. It would be useful for this new package to be standardised in order to improve its external validity.
11. The training is currently a single-session, two-hour long package. Staff appear to have appreciated the practical aspects of the training e.g., the voices exercise. As exercises such as these take time, a half-day training session might allow more time for skills practice and reflection, leading to greater consolidation of knowledge.
12. However, the above format may make it harder for services to prioritise the training. An alternative format would be a series of shorter training sessions spread over several months to keep the ideas in people's minds.

Future Training Evaluation

In order to evaluate the impact of the recommendations made above, it will be crucial for the BANES EIP team to evaluate future training using a similar methodology i.e., using pre-, post- and follow-up questionnaires. This is especially important in terms of recommendations that pertain to supervision and consultation, involvement of PPE and time for practical experience as the participants valued these components. The barriers to utilising the consultation component could also be evaluated in the next phase of evaluation.

The lack of impact on referral rates would suggest the need for a qualitative study or context analysis exploring the reasons why staff do not refer (e.g. those services do not encounter psychosis patients; staff are too busy to make referrals; they do not believe the services will be able to help; they are focussed on other tasks and therefore miss psychosis) and then design an intervention based on this new information.

As mentioned in the introduction, services run the risk of overdiagnosing the ARMS, which can unnecessarily distress patients and cost the service valuable

time and resources. This project did not find an increase in the number of referrals to the BANES EIP team as a consequence of training. One explanation for this is evidence-based training about the ARMS helped staff to be discerning about the symptoms they were observing and this had an impact on the quality and quantity of referrals they were making (i.e., there were no appropriate referrals to be made in the time-period being examined). It is therefore imperative that the BANES EIP team continues to provide updated evidence-based training on the ARMS that includes information on appropriate screening tools and interventions, if services are to avoid overdiagnosis.

Response from the Service

Feedback was sought from the BANES EIP Team Manager and two members of staff who were closely involved in the evaluation. The service found the report useful and said that it had been a pleasure to collaborate with the University of Bath. The primary aim of the training was to spread awareness of psychosis and reduce stigma, and the service is happy that it is achieving this. The lack of impact on referrals is interesting as the same training offered recently to staff at the University of Bath resulted in a surge in referrals. This could be the consequence of University staff having access to a much larger pool of young people involved in the transition from home to university, which is known to be a challenging period. The service hopes to put some recommendations into practice and re-evaluate the training in due course.

Limitations of the Study

The questionnaires used in the study were developed from ones previously piloted within the trust and assessed the key components of training as described in the evidence-base. However, as these questionnaires have not been validated, it is important to be cautious when considering the impact of the training package. For Question 1, categorical data (e.g., 0-5 cases, 6-10 cases, etc.) was collected instead of actual number of cases. In order to carry out statistical analyses, this data was transformed into ordinal data. This resulted in a loss of sensitivity to the quantitative analyses carried out on this data. This should be noted for future studies and specifically for when this training programme is being re-evaluated.

The current evaluation did not run focus groups and there was therefore insufficient qualitative data for formal qualitative analysis. This could be addressed in future evaluations.

Follow-up data was collected at three months, which might not have allowed sufficient time for staff to come across complex cases or be able to put their new knowledge and skills into practice. This might be why there was no significant difference in the number of clients being asked about psychosis at follow-up when compared to pre-training.

The evaluation assumed there were potential referrals to be made within the services that were evaluated. It must be considered that there were no valid referrals within the period that was evaluated.

Finally, due to low numbers attending the training at Project 28 this training evaluation includes data from a second organisation i.e. Options for Living. It is unclear how this might have affected the findings. However, evaluating the impact of training run at two organisations also makes these findings more generalisable.

Conclusions

This project aimed to evaluate and recommend improvements to a training package provided by the BANES EIP team that was delivered with the intention of improving third sector professionals' knowledge and confidence in identifying and referring people at ultra-high risk of developing psychosis. There was an increase in staff knowledge and confidence as a consequence of the training. Recommendations were made to the BANES EIP team with a view to enhance the already positive impact of this training package. Better consultation and supervision on complex cases, more practical tasks and the involvement of persons with personal experience in training are crucial for improving the knowledge and confidence of staff in the third sector. It is key that future training is evaluated by the service and the training modified on the basis of feedback in order for the training to sustain its impact.

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Main Research Project

How are fear of illness recurrence, maladaptive coping behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?

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Proposed journal: British Journal of Clinical Psychology
This journal was selected because it publishes original research, both empirical and theoretical, on all aspects of clinical psychology (Appendix K)

Introduction

Defining Psychosis

The National Institute for Health and Care Excellence (NICE) offers the following definition: “Psychosis and the specific diagnosis of schizophrenia represent a major psychiatric disorder (or cluster of disorders) in which a person's perception, thoughts, mood and behaviour are significantly altered. The symptoms of psychosis and schizophrenia are usually divided into 'positive symptoms', including hallucinations (perception in the absence of any stimulus) and delusions (fixed or falsely held beliefs) and 'negative symptoms' (such as emotional apathy, lack of drive, poverty of speech, social withdrawal and self-neglect)” (NICE, 2014, p. 14).

A leaflet published by the Royal College of Psychiatrists (2015) describes psychosis as a common part of the experience of severe mental illness. It states, “there is no single specific test for psychosis as the symptoms are common to a number of disorders, including schizophrenia, bipolar disorder and psychotic depression” (p. 1).

The Threat Value of Psychosis

Aracena (2012) discusses how the media promulgates many myths about people with psychosis. For example, the author points out that people with psychosis are depicted in films such as ‘American Psycho’ and ‘Psycho’ as violent, unpredictable and evil. The media also often wrongly confuses psychosis to mean a ‘split personality’ disorder (Duckworth, Halpern, Schutt, & Gillespie, 2003; McNally, 2007). This is consistent with the predictions of a study (Drayton, Birchwood, & Trower, 1998) looking at early attachment experience and recovery from psychosis. The study suggested that “people with psychosis who have developed an insecure attachment style will have low self-esteem and an impaired sense of self in respect of which psychosis poses a major threat and sealing over becomes an adaptive strategy. Such people are frightened of their experience of their psychosis. They lack the confidence and feeling of inherent safety (provided by a secure base) needed to explore and integrate the psychotic experience; instead it is denied and sealed over” (Drayton et al., 1998, p. 272).

Angermeyer and Matschinger (2003) found that one of the most notable differences between psychosis and depression is that the label of psychosis

produces predominantly negative responses in other people, while a label of depression usually generates a positive response. As a consequence of being viewed as impulsive and threatening, people with psychosis appear to evoke fear in other people. Contrastingly, people with depression appear to evoke altruistic tendencies in other people (Angermeyer & Matschinger, 2003). Psychosis also has many repercussions: morbidity, mortality (dying earlier, including from suicide), effects on employment and family life (Aracena, 2012). These factors contribute further to the perception of psychosis as threatening.

A recent study (Reavley, Morgan, & Jorm, 2017) sought to assess the factors predicting experiences of avoidance, discrimination and positive treatment in people with mental health problems with the aim to fill the gap in the stigma-related literature exploring the experiences of people with stigmatised mental health problems. A diagnosis of a psychotic disorder was a significant predictor of experiencing avoidance from others after disclosure, IRR (incidence rate ratio) = 2.23 (99% CI 1.27–3.92), and of experiencing discrimination, IRR = 2.32 (99% CI 1.26–4.27). The study also found that avoidance and discrimination scores were highly positively correlated, $r = 0.62$, $p < .001$ and that positive treatment scores were weakly correlated with both avoidance ($r = 0.12$, $p < .001$) and discrimination ($r = 0.15$, $p < .001$).

Schizophrenia is one of the most stigmatised mental health conditions alongside drug and alcohol abuse (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). Internalised stigma or self-stigma is the consequence of attributing damaging beliefs, commonly held by the public about mental illness, to oneself (Corrigan & Watson, 2002). Extensive research has shown that this internalisation of negative, discriminatory messages can have a deleterious impact on people with schizophrenia (Brohan, Elgie, Sartorius, Thornicroft, & Group, 2010; Cavelti, Kvrgic, Beck, Rüsch, & Vauth, 2012; Corrigan, Watson, & Barr, 2006). Consequently, individuals with self-stigma experience lower self-esteem, inferior quality of life, hopelessness and poorer adherence to treatment plans (Fung, Tsang, & Corrigan, 2008; Livingston & Boyd, 2010). Collett, Pugh, Waite, and Freeman (2016), in a recent study found that individuals with persecutory delusions had poorer self-compassion and self-esteem, greater fears of being mad, viewed themselves as inferior to others, and held unhelpful self-schemas.

Another study (Aakre, Klingaman, & Docherty, 2015) explored the stigma sentiments and self-identity of people with schizophrenia in order to assess their self-stigma. The study predicted that individuals with schizophrenia would report less favourable self-identity compared to controls with non-psychotic mental health conditions. Results found that individuals with schizophrenia evaluated themselves less favourably than did individuals with no psychosis history. Furthermore, the self-identity of individuals with schizophrenia was positively correlated with how they evaluated the schizophrenia label in others. The control group rated itself more favourably on The Semantic Differential Scale (Kroska & Harkness, 2006) indices of evaluation (good and nice, as opposed to bad and awful) and potency (one's level of power versus powerlessness) than did the schizophrenia group.

As a consequence of the factors described above we can speculate that people with psychosis will have a greater fear of illness recurrence than both healthy controls and people with non-psychotic mental health conditions. This corresponds to Salkovskis' (1996) proposal that anxiety about a mental illness (re)occurring is greater if the illness is perceived as especially serious (awfulness). Furthermore, we can expect that this anxiety is exacerbated for people in recovery from psychosis as the evidence indicates that their perceived coping skills, and support and understanding from others is lower than for other mental health problems.

Fear of Illness Recurrence

For those with past experience of an episode or episodes of ill health it is clear that the idea of a recurrence can become the focus of understandable preoccupation and worry, which may then itself result in distress and impairment. This is well documented in those in remission from physical problems such as cancer (Crist & Grunfeld, 2013; Grozdziej, 2015; Koch et al., 2014) and heart disease (Jones et al., 2015; Millstein & Huffman, 2017), and has been related to poor quality of life (Koch et al., 2014). The idea of fear of illness recurrence (FIR) has since been extended to mental health problems; FIR in psychosis is noted as being common and understandable given how distressing the experience of a first episode or a relapse of psychosis can be (Herz & Melville, 1980). FIR is linked to poorer emotional recovery in those in remission from psychosis (Gumley, O'Grady, Power, & Schwannauer, 2004). Although there may be some face validity in the idea that FIR may be particularly important in psychosis as opposed to "common

mental health problems," this has not been empirically established.

The fear of relapse in many people is related to a number of devastating presuppositions about relapse (Gumley et al., 2015). Psychosis-related-post-traumatic stress (PPTSD) characterised by intrusions, avoidance, anxiety, and being constantly tense and 'on guard' is reportedly common following the traumatic experience that is an episode of psychosis (Shaw, McFarlane, Bookless, & Air, 2002). The fear of psychosis recurrence, as a result, commonly produces responses such as viewing relapse as a catastrophic event, hypervigilance, fear, "interpersonal threat sensitivity" (Hagen, Turkington, & Berge, 2010, p. 130) on one end and the avoidance of thoughts, behaviours and emotions related to the experience of psychosis, and subsequent postponement of seeking help on the other (Gumley, Braehler, Laithwaite, MacBeth, & Gilbert, 2010; Gumley & MacBeth, 2006). Birchwood (2001) and Gumley, White, and Power (1999) have proposed that "fearful catastrophic appraisals of relapse in response to low-level psychotic experiences" (Gumley et al., 2015, p. 3) are associated with greater proclivity to actual relapse. A recent RCT found that FIR is a better predictor of actual relapse than early signs monitoring (Gumley et al., 2015). FIR is also associated with shorter duration to actual relapse (Herz & Melville, 1980). That is, those with greater anxiety about relapse were more likely to relapse sooner that those who had lesser fear of relapse. It is not known, however, what might influence the extent of fear of recurrence in psychosis. Given that there is evidence that the extent of health anxiety is strongly associated with FIR in cancer (Grozdziej, 2015), it is worth considering whether or not a similar relationship may be present in FIR in mental health problems and its possible link with "mental health anxiety".

The Concept of Mental Health Anxiety

Health anxiety is said to be accounted for by the tendency to misinterpret health-related information as signs that they currently have, or are at risk of developing, a serious medical illness (Salkovskis, Warwick, & Deale, 2003; Warwick & Salkovskis, 1990) e.g., heart disease or cancer. Asmundson, Abramowitz, Richter and Whedon (2010) conducted a literature review that summarised recent research regarding potential mechanisms underlying health anxiety. A common vulnerability factor for health anxiety was personal experience with serious illness—either one's own or in a close acquaintance or relation

(Abramowitz & Braddock, 2008; Salkovskis & Warwick, 1986; Taylor, 2004). Karademas (2009) found that exposure to the suffering of unknown individuals can also contribute to health anxiety.

Recent research on health anxiety has revealed that in ways not dissimilar to how people worry about their physical well-being, individuals with concerns about their mental health also experience severe and lasting anxiety about their mental health (Anderson, Saulsman, & Nathan, 2011; Rachman, 2012). Worry has also been implicated in the causation of paranoia in Freeman, Dunn, Startup, Pugh, Cordwell, Mander, Cernis, et al's (2015) recent research. Bassett, Sperlinger and Freeman (2009) in their study on fear of madness found that bigger worries [as assessed by the Worries About Mental Health (WAMH) questionnaire] were positively correlated to higher levels of 'delusional distress'. The WAMH is comprised of items such as 'I worry my mind is falling apart' and 'I worry that feeling I have special powers means I am mentally unbalanced' (Bassett et al., 2009). The authors asserted that this "fear of madness" (p. 39) worsens delusional distress and advocated that this worry needed to be addressed in treatment to alleviate the other symptoms of psychosis. This study is vital because their proposal that fear of madness might aggravate distress caused by symptoms is akin to Salkovskis and Warwick's (1986) proposal that symptoms can get worse just by paying excessive attention to them.

The Concept of Mental Defeat

The perception of oneself as having failed or feeling dehumanised and lacking agency as a consequence of a mental health problem or traumatic event is described in the literature as mental defeat (Gilbert & Allan, 1998; Rooke & Birchwood, 1998). Ehlers et al. (1998) found elevated mental defeat in a group of rape survivors with poorer outcome after traditional relieving work when compared to a comparable group of survivors with better treatment outcomes.

A review by Taylor, Gooding, Wood, and Tarrier (2011) synthesised existing evidence investigating links between defeat, entrapment and psychopathology in the domains of depression, suicidality, PTSD and other anxiety disorders. The review found that perceptions of defeat and entrapment were correlated with various types of psychopathology and this relationship was significant even when

the impact of other environmental and psychological stressors on psychopathology were accounted for.

Relationship between Variables of Interest

Both FIR and health anxiety are characterised by preoccupation with and sensitivity to symptoms and heightened perceptions of risk of serious illness or its recurrence. Individuals with psychosis inclined towards health anxiety could therefore be especially susceptible to developing FIR, driven by hypervigilance to signs of danger, selective attention to threat information, catastrophisation of paranoia, or avoidance of reminders of psychosis and treatment (Morrison, 1998). Catastrophic appraisals of possible signs of relapse, fear, vigilance and interpersonal threat sensitivity are a likely consequence of FIR, as are cognitive, emotional and behavioural avoidance and postponement of accessing help (Gumley et al., 2010; Gumley & MacBeth, 2006). Howe, Salkovskis, and Lagerdahl (2014) found that in cancer, mental defeat can predict fear of recurrence and earlier research in psychosis suggest that relapse and FIR in psychosis can in turn can lead to depression and anxiety (Karatzias, Gumley, Power, & O'Grady, 2007). Rooke and Birchwood (1998) suggest that these feelings and a loss of personal agency are linked to a withdrawal from valued activities and goals and to a more negative view of the consequences of psychosis. All of these factors have corresponding elements in the Cognitive Behavioural Therapy (CBT) model of physical health anxiety (Warwick & Salkovskis, 1990). This model hypothesises that in people with health anxiety physical symptoms are catastrophised, and as a result the likelihood of a specific illness is deemed higher than it actually is (Salkovskis & Warwick, 1986).

In summary, it is hypothesised that Mental Health anxiety represents a vulnerability factor for Fear of Illness Recurrence in those who perceived themselves to be recovered or recovering. The occurrence of ambiguous experiences will tend to activate such fears of recurrence of illness, particularly when the “awfulness” of recurrence is perceived as especially serious (Salkovskis, 1996). FIR will tend to motivate safety seeking behaviour (maladaptive coping behaviours including attention to symptoms, reassurance seeking and so on) and distress at the prospect of recurrence, with there being a reciprocal relationship. As a secondary appraisal, mental defeat (the sense that one’s agency has been sapped, that one has become less of a person) will be activated and again form a

reciprocal relationship with FIR. Thus, each of these factors will in contribute to increases in the (mis)perception that the mental health problem is recurring (with there being some evidence from psychosis that fear of relapse may indeed have this effect).

The present study therefore aims to evaluate the extent and correlates of FIR and mental health anxiety (MHA) in those with some recovery from MH problems; psychosis is expected to differ from mental health problems without psychosis in this respect because it may be seen as more serious and/or pervasive.

Aims and Objectives

The primary aims of this study were to investigate whether (1) individuals in recovery from psychosis will have greater FIR than individuals recovering from mental health problems without psychosis, and if (2) high levels of MHA will be associated with higher levels of FIR, regardless of type of problem.

In supplementary analyses, the hypotheses that people will be more fearful of illness recurrence if they have experienced more episodes of illness will be evaluated. The links between mental defeat, FIR and maladaptive coping behaviours (reassurance seeking, self-monitoring) will also be considered.

Hypotheses

It was hypothesised that:

1. Participants with experience of psychosis will have greater FIR than those who have experienced mental health difficulties without symptoms of psychosis.
2. MHA and mental defeat will be positively related to and will predict FIR, irrespective of group.
3. Irrespective of group, higher levels of FIR and MHA will be associated with increased maladaptive health related coping behaviours, including but not limited to reassurance.
4. MHA, mental defeat and FIR will be related to and will predict psychological distress, irrespective of group.

Method

Design

This study utilised a cross-sectional questionnaire design. It explored and compared the influence of MHA and mental defeat on levels of FIR, psychological distress and maladaptive coping behaviours between three groups: people in recovery from psychosis, people in recovery from psychological difficulties without psychosis and healthy controls.

Participants

Participants were recruited through social media (Facebook, Twitter, online psychology forums and Call for Participants website) and from Early Intervention (EIP), recovery and secondary care mental health teams in Avon and Wiltshire Partnership Mental Health Foundation Trust and 2gether NHS Foundation Trust.

Definition of recovery. Diagnostic, dichotomous definitions of recovery from mental health difficulties have been challenged for some time now (Kaskutas et al., 2014; Slade, Amering, & Oades, 2008). Recovery can be better conceptualised as a personal journey, unique to each individual (Slade et al., 2014). In order to reflect this 'journey' in our study, recovery was measured as a continuous instead of a categorical variable. As improvement in mental health symptoms could potentially leave participants open to fear of recurrence we primarily looked for the personal perception of improvement in participants.

For the purposes of this study, therefore, the following definition of recovery offered by the South London and Maudsley NHS Foundation Trust and South West London and St George's Mental Health NHS Trust (2010, p. 4) was used:

> "• Recovery is about having a satisfying and fulfilling life, as defined by each person.
>
> • Recovery does not necessarily mean 'clinical recovery' (usually defined in terms of symptoms and cure) - it does mean 'social recovery' – building a life beyond illness without necessarily achieving the elimination of the symptoms of illness.
>
> • Recovery is often described as a journey, with its inevitable ups and downs and people often describe themselves as being 'in recovery' rather than 'recovered'."

Psychosis and non-psychosis mental health groups. Thirty-nine participants in recovery from mental health problems with psychosis and eighty-two participants in recovery from mental health problems without psychosis were recruited.

Inclusion criteria

- Aged 18 or over,
- Diagnosis of a mental health difficulty,
- Completed or on-going treatment,
- Capacity to provide informed consent for participation,
- Self-reported recovery, and
- No time limit was set for the time since diagnosis.

Healthy Control Group. Sixty-one healthy community controls were recruited for this study.

Inclusion criteria

- Aged 18 or over,
- No previous psychiatric diagnosis, and
- Capacity to provide informed consent for participation.

Measures

Demographic and clinical characteristics. Participants were asked to provide information about their age, ethnicity, level of education, relationship and employment status, and country of residence.

Mental Health Anxiety. Mental Health anxiety was measured using the Mental Health Anxiety (MHAI; Commons & Salkovskis, 2012), which is a 18-item self-report questionnaire measured on a 0 to 3 scale with higher scores indicating higher levels of mental health anxiety (clinical cut-off score is 27). The MHAI has demonstrated excellent internal consistency (Cronbach $\alpha = 0.92$) and test-retest reliability ($r = 0.68$) (Commons, Greenwood, & Anderson, 2016).

Mental defeat. Self-Perception Scale –Mental Health (SPS-MH; Tang & Salkovskis, 2004) described thoughts and feelings associated with a sense of mental defeat. Ratings are made using a five-point scale where 0 means ‘Not at

all/Never' and 4 means 'Very Strongly'. Summing all responses provides a total score, which can range from 0 to 96. There is currently no established cut-off for this scale (García-Campayo et al., 2010). The original version of this scale, the Pain Self-Perception Scale (PSPS) has demonstrated excellent internal consistency (Cronbach α = 0.98) and test-retest reliability (*r* = 0.92) (Tang, Salkovskis, & Hanna, 2007).

Fear of psychosis recurrence. The Fear of Recurrence Scale (FoRSe; Gumley, 2013) is a 23-item scale used in the detection of relapse in people diagnosed with schizophrenia. Responses are rated on a 4-point Likert scale (1 to 4). The items are clustered into three factors that include fear of relapse (7 items), awareness of symptoms (9 items), and intrusiveness of thoughts (7 items). The scores range from 23 to 92, with higher scores representing greater fear of recurrence. The Spearman's rho and Cronbach's α for the scale have been calculated to be 0.70 and 0.92, respectively.

Mental health-related coping behaviours. A new 33-item measure, the Reactions to Mental Health Worries Questionnaire (RMHWQ) was developed for and piloted before its use in this study. Responses are rated on a 6-point Likert scale (0=never, 5=always); scores range from 0 to 165. It measures maladaptive coping behaviours that a person may engage in as a result of mental health worries. The Cronbach's α (internal consistency) for the scale was calculated to be 0.91.

Impaired functioning. The Work and Social Adjustment Scale (WSAS; Marks, 1986; Mundt, Marks, Shear, & Greist, 2002) was employed to measure impaired functioning. It is a 5-item scale that assesses an individual's ability to perform everyday activities including work, home management, family and relationship interaction and social and private leisure activities. Each of the five items is rated on a 9-point scale ranging from 0 (not at all a problem) to 8 (very severely impaired) with total scores range between 0 and 40, with high scores denoting higher levels of disability (0-10: mild functional impairment; 11-20: moderately severe functional impairment; 21 and above: severe functional impairment). The WSAS has good internal consistency (i.e., Cronbach's α ranging between 0.70 and 0.90) and test-retest reliability (Pearson's *r* = 0.73).

Psychological distress

Depression. The PHQ-9 (Kroenke, Spitzer, & Williams, 2001) is a valid and reliable 9-item self-report screening inventory for depression symptoms. The PHQ-9 total score for the nine items ranges from 0 to 27 with higher scores indicating elevated depression (0-4: no depression; 5-9: mild depression; 10-14: moderate depression; 15-19: moderately severe depression; 20-27: severe depression).

Anxiety. The GAD-7 (Spitzer, Kroenke, Williams, & Lo, 2006) is a valid and reliable 7-item self-report screening inventory for anxiety symptoms. A total score for the seven items ranges from 0 to 21, with higher scores indicating elevated anxiety (0-5: mild anxiety; 6-10: moderate anxiety; 11-15: moderately severe anxiety; 16-21: severe anxiety).

Procedure

Participants willing to take part in the study were provided with an information sheet, consent form and questionnaire pack (Appendix L) either via an online link or by post with a pre-paid envelope to be returned to the researcher. Participants were encouraged to contact the research team with any questions or concerns about the study. They were given the option to complete the questionnaire alone or with support from the researcher.

Participation began with reading the information sheet, and reading and signing the consent form. Participants were then asked to provide demographic and clinical information, answer recovery-related screening questions, and complete measures on anxiety, depression, impaired functioning, MHA, FIR, mental defeat and mental health-related coping behaviours.

On completion of the measures, participants were asked to provide a contact address if they would like a summary of the study results and if they would like to participate in similar research studies. Participants were also informed that they would be sent a £5 LovetoShop voucher as a thank you for their time and participation. Participants then read the debrief sheet (Appendix L) that provided further information about the study and signposted them to sources of support should they need this as a consequence of their participation in the study. Finally, the debrief sheet thanked the participants for their time.

Data Analytic Strategy

Analyses were decided *a priori*:

1. Group characteristics were compared using one-way ANOVAs for each of the continuous variables used to characterise the groups; where main effects were significant, multiple comparisons using the LSD test were used. When Levene's test for homogeneity of variance is significant, multiple comparisons using the Dunnett's T3 test were used.
2. FIR scores were compared between the two main groups using independent samples *t*-tests.
3. FIR was entered into a hierarchical multiple regression as a dependent variable, with MHA and mental defeat as the independent variables.
4. Maladaptive coping behaviours were entered into a hierarchical multiple regression as a dependent variable with levels of FIR and MHA as independent variables.
5. Psychological distress was entered into a hierarchical multiple linear regression analysis as a dependent variable with levels of FIR, MHA and mental defeat as independent variables.

Hierarchical linear regression was chosen as all the proposed hypotheses were grounded in theory. For example, that mental health anxiety and mental defeat would predict fear of illness recurrence (Grozdziej, 2015; Morrison, 1998), fear of illness recurrence and mental health anxiety would predict maladaptive coping behaviour (Gumley et al., 2010; Gumley & MacBeth, 2006) and that fear of illness recurrence, mental health anxiety and mental defeat would predict psychological distress (Karatzias, Gumley, Power, & O'Grady, 2007).

Power considerations

A priori power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) was calculated and indicated a required sample size of 93 (31 in each group), to achieve an effect size of 0.33, power 0.8, alpha 0.05.

Involvement of people with personal experience

A person with personal experience (PPE) of mental illness was consulted to ensure that the research protocol, information sheet and questionnaire pack were clear, concise and acceptable for all participants. Piloting was undertaken with one

PPE to ascertain feasibility in terms of time needed for participants to complete the questionnaires.

Governance procedures and ethical considerations

This study was approved by the London – London Bridge NHS Research Ethics Committee (REC; Reference: 17/LO/0068), the Health Research Authority, the University of Bath Psychology Research Ethics Committee (Reference: 17/LO/0068) and the Research and Development Teams of the local NHS Trusts involved in data collection (see Appendix M).

Results

Participants

Two hundred and nineteen participants completed the questionnaires between 4th March and 4th May 2017. All 61 healthy controls that completed the questionnaires were included in the study. Out of the 121 clinical participants, eight were recruited from mental health services and the remainder (n=113) were recruited online.

One hundred and twenty-one clinical participants who rated themselves as ‘neutral’ (1), ‘mildly agree’ (2), ‘moderately agree’ (3), ‘agree’ (4), and ‘strongly agree’ (5) on the screening question “Would you say that you have been able to build a life beyond your mental illness (even if all your symptoms haven't disappeared)?” were deemed as self-reporting as in recovery and were included in the study. Those rating themselves as ‘strongly disagree’, ‘disagree’, ‘moderately disagree’ and ‘mildly disagree’ were not included in the study.

Overview

The demographic characteristics of the sample will be presented, followed by clinical characteristics. The primary analysis compares fear of illness recurrence (FIR) in people considering themselves to be in recovery from psychosis with those regarding themselves as being in recovery from psychological difficulties without psychosis as a symptom; the third group to be compared is “healthy” controls (not reporting past or present mental health problems). Finally several stepwise multiple regression analyses based on the *a priori* data analytic strategy will be run.

Demographic and clinical characteristics. Demographic and clinical characteristics are presented in Tables 1 and 2. Chi-square tests were carried out for the categorical variables. For many of these (except for gender and for whether the participant was resident in the UK or not) the cell frequencies were low (see Table 2) and the categories were therefore collapsed as described below for the purpose of statistical comparisons.

- Ethnicity was collapsed into ‘Caucasian’ (including only ‘Caucasian’ category) and ‘Non-Caucasian’ (including ‘Asian’, ‘Black’, ‘Chicana’ and ‘Mixed’ categories).
- Educational Qualifications was collapsed into ‘A-levels and below’ (including ‘no formal qualification’, ‘primary’, ‘secondary’ and ‘A-levels’ categories) and ‘Diploma and above’ (including ‘diploma’, ‘degree’, postgraduate’ and ‘other’ categories).
- Relationship Status was collapsed into ‘Single’ (including ‘single’, ‘separating’, ‘divorced’ and ‘widowed’ categories) and ‘In a relationship’ (including ‘dating’, long-term relationship, ‘cohabiting’ and ‘married’ categories).
- Employment Situation was collapsed into ‘Employed’ (including ‘paid’, ‘unpaid’, ‘on sick leave’ and ‘other’ categories) and ‘Unemployed’ (including only ‘unemployed’ category).

Chi-square tests revealed no significant differences between healthy controls, the psychosis group and the non-psychosis group for educational qualification, relationship status, employment situation, or UK residency. There were, however, significant differences between the three groups for gender and ethnicity.

Table 1
Demographic characteristics of the participants

	Psychosis	No psychosis	Healthy controls	All clinical participants	Statistics		
	Number (%)	Number (%)	Number (%)	Number (%)	Chi-square	*df**	*p*
Gender					7.07	2	.029
Female	29 (74.4)	74 (90.2)	46 (75.4)	103 (85.1)			
Male	9 (23.1)	8 (9.8)	15 (24.6)	17 (14.1)			
Transmasculine	1 (2.5)	-	-	1 (0.8)			
Ethnicity					12.94	2	.002
Caucasian	35 (89.7)	74 (90.2)	42 (68.9)	109 (90.1)			
Asian	2 (5.1)	4 (4.9)	15 (24.6)	6 (5.0)			
Mixed	-	4 (4.9)	3 (4.9)	4 (3.3)			
Black	1 (2.6)	-	1 (1.6)	1 (0.8)			
Chicana	1 (2.6)	-	-	1 (0.8)			
Education					2.77	2	.250
No formal qualification	2 (5.1)	-	-	2 (1.6)			
Primary	-	2 (2.4)	-	2 (1.6)			
Secondary	7 (17.9)	8 (9.8)	5 (8.2)	15 (12.5)			
Diploma	7 (17.9)	9 (11.0)	6 (9.8)	16 (13.2)			
Degree	13 (33.3)	23 (28.0)	14 (23.0)	36 (29.8)			
Postgraduate	10 (25.6)	38 (46.3)	34 (55.7)	48 (39.7)			
Other	-	1 (1.2)	-	1 (0.8)			
A-levels	-	1 (1.2)	2 (3.3)	1 (0.8)			

	Psychosis	No psychosis	Healthy controls	All clinical participants	Statistics		
	Number (%)	Number (%)	Number (%)	Number (%)	Chi-square	*df**	*p*
Employment status					5.17	2	.075
Paid work	22 (56.4)	60 (73.2)	47 (77.0)	82 (67.8)			
Unpaid work	2 (5.1)	1 (1.2)	-	3 (2.5)			
On sick leave	-	4 (4.9)	-	4 (3.3)			
Unemployed	9 (23.1)	7 (8.5)	7 (11.5)	16 (13.2)			
Other	6 (15.4)	10 (12.2)	7 (11.5)	16 (13.2)			
Relationship status					4.21	2	.122
Married	8 (20.5)	21 (25.6)	23 (37.7)	29 (24.0)			
Single	18 (46.2)	30 (36.6)	18 (29.5)	48 (39.7)			
Cohabiting	9 (23.1)	16 (19.5)	12 (19.7)	25 (20.7)			
Dating	2(5.1)	14 (17.1)	7 (11.5)	16 (13.2)			
In a long-term relationship	-	1 (1.2)	-	1 (0.8)			
Divorced	-	-	1 (1.6)	-			
Separating	2 (5.1)	-	-	2 (1.6)			
Widowed	-	-	-	-			
UK resident					1.5	2	.460
Yes	32 (82.1)	62 (75.6)	51 (83.6)	94 (77.7)			
No	7 (17.9)	20 (24.4)	10 (16.4)	27 (22.3)			

Note. **df*, degrees of freedom

One-way ANOVAs (see Tables 2 and 3) showed that there was no significant main effect of group on age. However, there was a significant main effect of group on mental health anxiety, mental defeat, depression, generalised anxiety, social functioning and mental health-related coping behaviours. Number of illness episodes was significantly different for the two mental health groups. In all of these, the two mental health groups' scores were significantly more severe than those of the controls.

The mean scores on the MHAI were below cut-off (27) for both clinical groups. Interestingly, the mean RMHWQ score for the non-psychosis group was higher than the mean score for the group with psychosis. The scores on the PHQ-9, GAD-7 and WSAS were largely in the 'moderate' region for both clinical groups (except for the PHQ-9 score for the non-psychosis group which was 'mild').

Mean WSAS scores for the clinical group was 13.6. Mundt, Marks, Shear, and Greist (2002; p. 463) suggest that "scores between 10 and 20 [on the WSAS] are associated with significant functional impairment but less severe clinical symptomatology". In addition, the mean PHQ-9 scores for the clinical participants was 9.4 (mild depression) and "watchful waiting" is the recommended intervention for this score category (Kroenke & Spitzer, 2002; p. 2). The research team therefore deemed the clinical group as sufficiently recovered to carry out the planned analysis.

There was a significant correlation between the rating of recovery and of work and social adjustment in the larger mental health group, $r\,(119) = -.51$, $p < .01$. The correlation was similar when the group was divided into non-psychosis, $r\,(80) = -.51$, $p < .01$, versus psychosis, $r\,(37) = -.44$, $p = .005$. There was however, a significant difference between the group without psychosis (M = 3.05, SD = 1.21) and the group with psychosis (M = 3.69, SD = 1.11) on the recovery scale, $t_{(119)} = 2.89$, $p = .004$. A mean score of 3 corresponds to a recovery rating of 'moderately agree' while a score of 4 corresponds to a recovery rating of 'agree'.

Table 2
Mean and standard deviations of demographic and clinical characteristics

	Psychosis n=39 Mean (SD) (Range)	No Psychosis n=82 Mean (SD) (Range)	Healthy Controls n=61 Mean (SD) (Range)	All clinical participants N=121 Mean (SD) (Range)	Statistics *F*	*df*	*p*
Age	33.05 (11.30) (18-73)	32.94 (10.63) (18-73)	32.44 (11.84) (18-73)	32.98 (10.80) (18-73)	0.47	2, 179	.954
Mental Health Anxiety^#	20.74[a] (7.50) (0-42)	17.43[a] (8.34) (0-42)	8.57[b] (5.58) (0-42)	18.50 (8.20) (0-42)	39.79*	2, 179	<.001
Mental defeat (SPS)	30.10[a] (23.69) (0-96)	22.96[a] (21.46) (0-96)	12.75[b] (21.61) (0-96)	25.26 (22.36) (0-96)	7.95*	2, 179	<.001
Depression (PHQ-9)	10.46[a] (6.23) (0-27)	8.88[a] (6.00) (0-27)	5.39[b] (5.41) (0-27)	9.39 (6.10) (0-27)	10.38*	2, 179	<.001
Anxiety (GAD-7)	8.44[a] (6.04) (0-21)	7.62[a] (5.47) (0-21)	5.20[b] (4.54) (0-21)	7.88* (5.65) (0-21)	5.50*	2, 179	.005
Social functioning^ (WSAS)	16.13 [a] (9.44) (0-45)	12.46[a] (9.36) (0-45)	4.52[b] (6.38) (0-45)	13.64 (9.50) (0-45)	25.83*	2, 179	<.001
Maladaptive coping behaviours (RMHWQ)	67.71[a] (25.11) (0-165)	68.59[a] (22.77) (0-165)	51.93[b] (23.01) (0-165)	68.31 (23.45) (0-165)	9.97*	2, 179	<.001
Number of episodes	8.90 (7.92) (1-25)	5.79 (6.62) (1-25)	-	6.79 (7.18) (1-25)	5.11*	1, 119	.026

Notes. SPS: Self-perception Scale; PHQ-9: Patient Health Questionnaire-9; GAD-7: Generalised Anxiety Disorder-7; WSAS: Work and Social Adjustment Scale; RMHWQ: Reactions to Mental Health Worries Questionnaire; RCQ-MH: Responsibility for Consultation Questionnaire – Mental Health; #Mental Health Anxiety score was calculated by adding up scores of the first 14 items on the MHAI; ^ Dunnett's T3 used as Levene's statistic was significant; Means with differing alphabet superscripts differ significantly; * indicates a significant difference between groups.

Table 3
Mean differences, standard errors, significance and confidence intervals for ANOVA

	Mean diff.	Std. error	Significance	95% confidence interval Lower	Upper
Age					
HC–NP	- 0.49	1.89	.793	- 4.23	3.24
HC–P	- 0.61	2.29	.791	- 5.14	3.92
NP–P	- 0.11	2.18	.959	- 4.41	4.18
MHA					
HC–NP*	- 8.85	1.17	.000	- 11.67	- 6.04
HC–P*	-12.17	1.40	.000	- 15.59	- 8.75
NP–P	- 3.32	1.51	.090	- 7.00	0.368
Mental defeat					
HC–NP*	- 10.21	3.72	.007	- 17.55	- 2.87
HC–P*	- 17.35	4.51	.000	- 26.25	- 8.45
NP–P	- 7.14	4.28	.097	- 15.58	1.31
Depression					
HC–NP*	- 3.48	0.99	.001	- 5.44	- 1.53
HC–P*	- 5.07	1.20	.000	- 7.44	- 2.69
NP–P	- 1.58	1.14	.167	- 3.83	0.67
Anxiety					
HC–NP*	- 2.43	0.90	.008	- 4.20	- 0.65
HC–P*	- 3.24	1.09	.003	- 5.39	- 1.09
NP–P	- 0.81	1.03	.432	- 2.85	1.22
Social functioning					
HC–NP*	- 7.94	1.31	.000	- 11.12	- 4.76
HC–P*	- 11.60	1.72	.000	- 15.82	- 7.39
NP–P	- 3.66	1.83	.139	- 8.13	0,80
Maladaptive coping behaviours					
HC–NP*	- 16.65	3.95	.000	- 24.45	- 8.85
HC–P*	-15.78	4.79	.001	-25.24	- 6.33
NP–P	0.87	4.55	.849	- 8.10	9.84

Note: HC: Healthy control; NP: Group without psychosis; P: Group with psychosis;
*Significant difference between groups

Before conducing parametric statistical analyses, the relevant assumptions of this statistical analysis were tested. Firstly, a sample size of 182 was deemed adequate given three independent variables to be included in the hierarchical analyses (Tabachnick, Fidell, & Osterlind, 2001). An examination of correlations (Table 4) revealed that no independent variables were highly correlated ($r > .9$; Field, 2013). Also, as the collinearity statistics (i.e., Tolerance and VIF) were all within accepted limits, the assumption of multicollinearity was met (Coakes, Steed, & Dzidic, 2006; Hair, Black, Babin, Anderson, & Tatham, 1998). Residual and scatter plots indicated the assumptions of linearity and homoscedasticity were

satisfied (Hair et al., 1998; Pallant, 2001). Due to the data for Mental Defeat, Fear of illness Recurrence and Mental Health Anxiety being positively skewed, bootstrapping for confidence intervals was carried out for both the independent samples *t*-test and the hierarchical linear regressions (Field, 2013).

Table 4

Correlations between all dependent and predictor variables

Variable	1	2	3	4	5	6
1. Mental defeat	-	.435	.757	.600	.839	.698
2. Maladaptive coping behaviours		-	.556	.608	.510	.513
3. Fear of illness recurrence			-	.763	.734	.696
4. Mental Health Anxiety				-	.672	.710
5. Psychological distress					-	.725
6. Work and Social Adjustment Scale						-

Primary analysis. An independent samples *t*-test (see Table 5) was conducted to compare the group with psychosis with the group with mental health difficulties but no psychosis on fear of relapse. The results indicated that those in recovery from psychosis reported significantly higher levels of fear of relapse $t_{(119)} = -1.98$, $p = .048$. From this analysis we can be 95 percent confident that the difference in mean FIR scores between psychosis and non-psychosis groups is between 0.64 and 0.02. In this sample, the non-psychosis group have lower FIR scores than the psychosis group by 0.33. We can also conclude that there is a statistically significant difference between the groups because the 95% confidence interval does not include the null value, zero. Cohen's effect size value ($d = .36$) suggested a small to moderate effect.

Table 5
Comparison of FIR in psychosis and non-psychosis mental health groups

	Fear of relapse							
						BCa^ 95% confidence interval		Effect size,
Groups	n	M	SD	*t*	*Mean difference*	Lower	Upper	Cohen's *d*
Psychosis	39	2.44	0.93	-1.98*	-0.33	-0.64	-0.02	-0.363
No psychosis	82	2.11	0.82					

*Significant, p = .048; ^bias corrected accelerated

Regression analyses.

Regression analysis 1: fear of illness recurrence. A hierarchical multiple linear regression analysis was performed to examine the strength of mental health anxiety and mental defeat in predicting FIR. A significant model accounting for 72 percent of the variance in FIR was obtained, as illustrated in Table 6. Cohen's effect size value (f^2 = .07) suggested a small to moderate effect.

Table 6

Model summary and Beta values for the multiple regression of mental health anxiety and mental defeat as predictors of FIR

Model	R^2	*Adjusted* R^2	*F* change	*B*	*β*	*t*	BCa^ 95% confidence interval for *B*		Effect size, Cohen's f^2
							Lower	Upper	
Mental Health Anxiety				.048	.483	9.82*	.038	.058	
	.723	.720	233.34						0.07
Mental defeat				.018	.468	9.51*	.014	.022	

Note. β – standardised regression coefficient; *p= .001; ^bias corrected accelerated

Regression analysis 2: maladaptive coping behaviours. A hierarchical multiple linear regression analysis was performed to examine the strength of mental health anxiety and FIR in predicting maladaptive coping behaviours. A significant model accounting for 38.3 percent of the variance in maladaptive coping behaviours was obtained, as illustrated in Table 7. Cohen's effect size value (f^2 = .07) suggested a small to moderate effect.

Table 7

Model summary and Beta values for the multiple regression of mental health anxiety and FIR as predictors of maladaptive coping behaviours

Model	R^2	*Adjusted* R^2	*F* change	*B*	*β*	*t*	BCa^ 95% confidence interval for *B*		Effect size, Cohen's f^2
							Lower	Upper	
Mental Health Anxiety				1.228	.439	4.86^	.724	1.753	
	.390	.383	57.24						0.07
FIR				6.170	.221	2.44*	1.463	10.926	

Note. β – standardised regression coefficient; *Significant, *p*=.015; ^Significant, p< .001; ^bias corrected accelerated

Regression analysis 3: psychological distress. A hierarchical multiple linear regression analysis was performed to examine the strength of levels of FIR, MHA and mental defeat in predicting psychological distress. Only mental defeat and MHA were significantly associated, accounting for 74.6 percent of the variance psychological distress; the contribution of FIR to the variance was not significant at *p* = .428, as illustrated in Table 8. Cohen's effect size value (f^2 = .08) suggested a small to moderate effect.

Table 8

Model summary and Beta values for the multiple regression of mental defeat and MHA as predictors of psychological distress

Model	R^2	*Adjusted* R^2	*F* change	*B*	*β*	*t*	BCa^ 95% confidence interval for *B*		Effect size, Cohen's f^2
							Lower	Upper	
Mental Defeat				.308	.652	11.34*	.254	.364	
FIR	.750	.746	177.98	.765	.062	.874#	-1.18	2.82	0.08
Mental Health Anxiety				.288	.234	4.027*	1.48	.418	

Note. β – standardised regression coefficient; *Significant, *p* = .001; #not significant, *p*=.428; ^bias corrected accelerated

Discussion

The study aimed to evaluate the extent and correlates of mental health anxiety (MHA) and fear of illness recurrence (FIR), differentiating psychosis from mental health problems without psychosis. It was hypothesised that psychosis would be more negatively evaluated in terms of its likely consequences than non-psychotic mental health problems, leading to greater FIR; this was indeed the case, although levels of FIR in non-psychotic mental health problems were rather high. Interestingly, there were no other differences between these groups (in terms of mental defeat, anxiety, depression, social functioning, and maladaptive coping behaviours). The hypothesised relationship between FIR and MHA was also found, and maladaptive coping behaviours were associated with FIR and MHA, again as hypothesised. Mental defeat was associated with FIR and psychological distress (anxiety and depression).

The finding that MHA and mental defeat predicted FIR is consistent with the findings of a similar, recent study looking at fear of cancer recurrence (Grozdziej, 2015) and Morrison's (1998) study that suggested that health anxiety in people who experience psychosis makes them vulnerable to developing FIR as a consequence of attentional biases, safety-seeking behaviours, hypervigilance to symptoms and catastrophic interpretations of paranoid thoughts. MHA or the preoccupation with and sensitivity to symptoms can predict FIR or a heightened perception of risk of mental illness recurrence. While MHA can occur even before the first experience of an episode of mental illness, by definition FIR is fear of re-experiencing a condition from which a person has recovered. Mental defeat, or a sense of lacking agency over one's circumstances following an experience of mental illness can lead to a fear of the illness recurring. It could be hypothesised that the loss of control experienced in mental defeat mediates this relationship if an individual feels that they had no agency in their illness or recovery.

The finding that MHA and FIR predicted reactions to mental health worries is consistent with two studies that looked at fear of psychosis recurrence (Gumley et al., 2010; Gumley & MacBeth, 2006). These studies found that fear of psychosis recurrence often results in maladaptive coping behaviours as a consequence of catastrophic misinterpretations of signs of illness. It is well established in the literature that MHA and FIR promote hypervigilance to signs of illness, avoidance, reassurance seeking and other unhelpful coping behaviours. It is possible that

MHA and FIR lead to worry characterised by intolerance of uncertainty (Freeston, Rheaume, Letarte, Dugas, & Ladouceur, 1994; Howe, Salkovskis, & Lagerdahl, 2014) which then leads to maladaptive coping behaviours.

Finally, the finding that mental defeat and MHA predict psychological distress is also consistent with the findings of a recent study (Howe, Salkovskis, & Lagerdahl, 2014) that looked at the psychological predictors of health anxiety, quality of life and depression in cancer patients and found that mental defeat was the strongest predictor of subsequent psychological distress. Contrary to hypothesis FIR did not significantly predict any variance in psychological distress. This is in contrast to the findings of Karatzias et al. (2007) who found that fear of relapse and feeling unable to control relapse in psychosis can lead to depression and anxiety. Severe and problematic worry about mental health (MHA) and an erosion of a sense of self (mental defeat) can lead to psychological distress. It could be hypothesised that the loss of social role and self-criticism exacerbated by worry could mediate this relationship.

Overall, from the findings of this study we can summarise that mental health anxiety and mental defeat predict FIR which in turn increases reliance upon unhelpful coping behaviours and this subsequently has an effect on mood and levels of anxiety.

Clinical Implications

This study concluded that levels of psychological distress, mental defeat, MHA, poor social functioning, FIR and maladaptive coping behaviours are all significantly elevated in people in recovery from psychological difficulties when compared to healthy controls. This is a cause for concern as many of these factors have been shown to predict future relapse in psychosis (Gumley, 2013); it is not clear whether this is the case in other mental health problems. If so, this would suggest the need for interventions to reduce these factors after recovery to reduce the possibility of actual relapse.

Defeat is a strong predictor of psychological distress. It is characterised by loss of autonomy and identity, and feelings of being dehumanised (Ehlers et al., 1998). It is important that this nuanced concept is understood by clinicians and not confused with anxiety or depression. A Compassion Focussed Therapy (Gilbert,

2009) approach, a modified CBT approach or an Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999) approach may help alleviate this experience of feeling defeated by life and mental illness; novel, targeted interventions that address feelings of dehumanisation and self-catastrophising thoughts might also be considered.

MHA was the strongest predictor of FIR for all three groups in this study. This is a relatively new and under-researched concept and clinicians might need information and training in how this differs from anxiety in the context of psychological difficulties. MHA needs to be addressed during interventions to reduce FIR, which in turn may keep relapses at bay. One way of doing this would be to extend CBT for health anxiety (Salkovskis et al., 2003) to mental health anxiety. This is important given the findings of the Worry Intervention Trial (Freeman, Dunn, Startup, Pugh, Cordwell, Mander, Černis, et al., 2015) that found that intervention techniques that address worry are feasibly a helpful addition to the routine psychological management of psychosis.

FIR scales could be used before the end of treatment so that these cognitions can be explored and addressed during relapse-prevention planning. This is crucial as previous research has shown that FIR is better at predicting actual relapse than early-signs monitoring in psychosis (Gumley et al., 2015).

Research Implications

This study indicates the likely importance of elevated levels of MHA and FIR in the adjustment of those in recovery from psychosis and mental defeat linked to psychological distress following mental health problems. Future research will need to explore if there are cause and effect links between these constructs, and whether the impact of FIR in mental health problems other than psychosis may link to actual relapse. Targeted interventions for MHA and FIR should be evaluated.

While this study has discovered that psychosis as a symptom increases FIR in individuals, further research will need to investigate what precisely about the experience of psychosis makes the idea of a further episode so frightening. Misinterpretation, distractibility, hypervigilance etc. might mediate the relationship between the constructs examined in this study. Future research could look at the

mechanisms underlying the links between mental health anxiety, mental defeat and fear of illness recurrence.

Limitations

The current study has methodological strengths in terms of the relatively large sample size with an achieved power of 0.9. However, some limitations must be considered. Samples were recruited primarily over the Internet and were therefore self-diagnosing. The accuracy of these diagnoses should therefore be viewed with caution. Participants also self-defined their recovery and clinicians' views on recovery could not be considered for the majority of the sample as they were recruited online. However, we suggest that it is at least as important as a clinician's opinion that an individual self-identifies as being in recovery. Recruitment over the Internet gave this study access to a large pool of participants. As a consequence, the findings of this study are more generalisable than if recruitment was only from mental health services for the two clinical groups.

The mental health groups were different in their rating of recovery with participants without psychosis regarding themselves as more significantly recovered than those with psychosis. However, it is unlikely that this could explain the difference between groups for FIR as participants without psychosis would have a lot more to lose (as they were more recovered) than the participants with psychosis.

A further limitation of this study is the homogenous nature of the sample that had a high proportion of participants who were White British, female, postgraduate and in paid employment.

One questionnaire used in this study i.e., the Reactions to Mental Health Worries Questionnaire was not a validated measure. Similarly, the measure of mental defeat in mental health that was used (Tang & Salkovskis, 2004) has not been tested for reliability and validity. However, the original measure is psychometrically robust (Tang et al., 2007).

It must be considered that instead of the recovery screening question a validated quality of life measure (e.g. Recovering Quality of Life measure [ReQoL] Keetharuth et al., 2017) could be have been employed for this purpose.

It was a further limitation that the exclusion criteria initially considered were not used to screen participants e.g., previous or current history of substance misuse. It is therefore difficult to say how variables such as past and/or current substance misuse and the presence of cognitive deficits, for example, might have influenced the findings of this study. Future research could control for these variables by including these criteria in the screening section of the study, be it online or in person.

Conclusions

This study found that overall, people defining themselves as in recovery are worried about the recurrence of their mental health problems and the extent of this is linked to mental health anxiety. There should be a greater focus on mental health anxiety in planning interventions for psychological difficulties. Next steps would be to study the factors that mediate the relationship between fear of relapse and mental health anxiety. Future research could also evaluate interventions targeting mental health anxiety in individuals with or in recovery from psychosis to study the impact on relapse.

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Executive summary: Main Research Project

How are fear of illness recurrence, maladaptive coping behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?

The experience of psychosis can be debilitating and it is unsurprising that fear of illness recurrence (FIR) is a distressing possibility for those in recovery. Fear of relapse is a better predictor of actual relapse than early signs monitoring, according to a recent randomised controlled trial.

Recent research on health anxiety has revealed that in ways not dissimilar to how people worry about their physical wellbeing, individuals with concerns about their mental health also experience severe and lasting anxiety about their mental health i.e., mental health anxiety (MHA).

Both FIR and health anxiety are characterised by preoccupation with and sensitivity to symptoms and heightened perceptions of risk of serious illness or its recurrence. Individuals with psychosis inclined towards health anxiety could therefore be especially susceptible to developing fear of illness recurrence, driven by hypervigilance to signs of danger, selective attention to threat information, catastrophisation of paranoia, or avoidance of reminders of psychosis and treatment. Catastrophic appraisals of possible signs of relapse, fear, vigilance and interpersonal threat sensitivity are a likely consequence of fear of illness recurrence, as are cognitive, emotional and behavioural avoidance, and postponement of accessing help.

Given the potentially catastrophic nature of fear of illness recurrence and the lack of research exploring if this is a concern for those in recovery for psychosis, the current study sought to explore this. The study compared fear of illness recurrence in three groups: people in recovery from psychosis, people in recovery from mental health difficulties without psychosis and healthy controls. It also sought to evaluate the extent and correlates of mental health anxiety, differentiating psychosis from mental health problems without psychosis. Participants were asked to complete a questionnaire pack.

Summary of findings:

It was hypothesised that psychosis would be more negatively evaluated in terms of its likely consequences than non-psychotic mental health problems, leading to greater FIR; this was indeed the case, although levels of FIR in non-psychotic mental health problems were rather high. Interestingly, there were no other differences between these groups (in terms of mental defeat, anxiety, depression, social functioning, and maladaptive coping behaviours). The hypothesised relationship between FIR and MHA was also found, and maladaptive coping behaviours were associated with FIR and MHA, again as hypothesised. Mental defeat was associated with FIR and psychological distress (anxiety and depression).

This study has provided evidence for the importance of intervening in mental health anxiety. One way of doing this would be to extend cognitive-behavioural therapy for health anxiety to mental health anxiety (Salkovskis et al., 2003). This is important given the findings of Freeman et al's (2015) Worry Intervention Trial that found that intervention techniques that address worry are feasibly a helpful addition to the routine psychological management of psychosis.

Furthermore, fear of illness recurrence scales could be used before the end of treatment so that these cognitions can be explored and addressed during relapse-prevention planning. This is crucial as previous research has shown that fear of illness recurrence is better at predicting actual relapse than early-signs monitoring in psychosis (Gumley et al., 2015).

While this study has discovered that the experience of psychosis increases fear of illness recurrence in individuals, further research will need to investigate what precisely about the experience of psychosis makes the idea of a further episode so frightening. Misinterpretation, distractibility, hypervigilance etc. might mediate the relationship between the constructs examined in this study. Future research could look at the mechanisms underlying the links between mental health anxiety, mental defeat and fear of illness recurrence.

This study indicates the likely importance of elevated levels of mental health anxiety and fear of illness recurrence in the adjustment of those in recovery from psychosis and mental defeat linked to psychological distress following mental

health problems. Future research will need to explore if there are cause and effect links between these constructs, and whether the impact of fear of illness recurrence in mental health problems other than psychosis may link to actual relapse. Any new, targeted interventions addressing mental health anxiety and fear of illness recurrence will need evaluation.

Connecting Narrative

This section aims to tell the story of the various research components that form part of my clinical psychology doctoral training at the University of Bath. Each research component i.e. main research project, service improvement project, critical literature review project and case studies will be looked at separately and within each section, common themes of challenges and learning points will be discussed. A final section will be dedicated to future aspirations.

Before getting into the narrative, I must begin by saying that the start of my training was marked by two life-altering bereavements, one following the other, of my mother and father. I was supported by the course staff to take the time I needed before coming back to the course. I was also asked if I wanted 6 months or a year off from the course, but I decided not to take this up, as I needed the distraction. Towards the end of my second year of training, my clinical tutor suggested that I apply for an extension of contract given that I was behind the rest of my cohort in the research component by about three months. This was sound advice that I heeded and an additional three months of funding was granted to me. However, as I write this, I am on track to viva at the same time as the rest of my cohort – an accomplishment of which I am told I should be very proud.

Main Research Project

I have been interested in psychosis since I worked for four years as a healthcare assistant at a medium-secure unit. My working age adult placement was with the Bristol Early Intervention in Psychosis Team. I approached tutors on the course with particular expertise and interest in psychosis to discuss possible projects. Several ideas came and went including one on a concept I had never heard of before, “imaginal relish”! An intervention study taking forward previous research looking into the Illness Beliefs model was planned and nearly put into action when I realised my heart was not into it even though I was already late in putting in a proposal. My internal supervisor, Dr Emma Griffith and I revisited a previous idea – one looking into fear of relapse in psychosis. We had several meetings and also met with Professor Paul Salkovskis, who became a second internal supervisor on the project, who helped me operationalise my general idea into specific research questions.

The process of seeking ethical approval has been a revelation for me, as I only needed University ethical approval when I did my Masters. I began with filling out the IRAS form, which took several tries for me to get just right after feedback from both my main supervisors. I remember that Dr Emma Griffith pointed out that I had inadvertently suggested in the form that I would seek consent from participants at two separate points when this was unnecessary! I am so glad this was spotted before it went through IRAS, as it would have been extra, unnecessary work that I did not need. As we were recruiting online and from people in recovery from psychosis and other mental health problems, I initially applied for proportionate review but this was not approved. The REC wanted me to go through a full review – they wanted to ensure that I had fully considered the ramifications of asking people who were in recovery about their thoughts and concerns about relapse. A meeting with the London Bridge REC was set up for late January 2017 – I was really running out of time! Professor Paul Salkovskis accompanied me to this as one of my supervisors. The REC meeting was a surreal experience with about 12 to 14 people sat in a room waiting for us with questions. We were asked about the upper age limit of 65 and why it was necessary. As it was not necessary, we agreed to remove the limit. We were asked about, and we explained the measures we put in place should participants get distressed as a consequence of participation in the study. We were told immediately after the meeting that the project was approved based on the minor amendments agreed at the meeting. Health Research Authority approval was received end-February 2017 when I realised I still needed to get Psychology Department ethical approval. Dr Cara Davis and the Chair of the committee did me a huge favour by turning this around in a matter of hours on 3rd March 2017. I then applied for R&D approval from the two Trusts I intended to recruit from i.e. AWP and 2gether NHS Foundation Trust. While AWP approval came through promptly, due to a backlog 2gether only approved recruitment from them in early April 2017. As a consequence the few people that I recruited from services were only from AWP. I really enjoyed the process of promoting my research online and I became very adept at using Twitter, Facebook and online forums for this purpose.

Recruitment proceeded at a steady rate with most participants in the group without psychosis. I felt very grateful to have chosen to do a cross-sectional questionnaire study that recruited online as it saved me so much time given that I

did not have very long before I needed to hand in. I had enough participants by the end of April when I ended recruitment for my doctoral project.
Professor Paul Salkovskis guided me through the data analysis, as statistics have never been my strong suit. Both Emma and Paul gave me valuable feedback on my final write-up that has shaped my project into one of publishable quality.

Service Improvement Project

I began thinking about my service improvement project on my first placement, which was with the Bristol EIP team. The commissioners of the service wanted them to look into groups that the team was not accessing as well as expected, namely, people of Chinese ethnicity (PCE), People engaged in sex-work and the Traveller community. I discussed the idea of looking into the PCE aspect with my placement supervisor and a tutor on the course with a view to implement changes to how the team promoted itself to this group. However, on looking at the demographics of Bristol and the caseload information it emerged that the Bristol EIP team was already getting the requisite number of PCE through their doors i.e. 2 per year. As there was no 'improvement' needed it was suggested that I instead do a consultancy project looking into all the three groups named by the commissioners (which I succeeded in completing for the Bristol EIP service).

My clinical tutor, who happened to work with the team with which I was on my second placement, suggested I evaluate and recommend improvements to a newly developed training package for professionals in the third-sector that was being offered by the BANES EIP team. I was excited to take this on because of my interest in psychosis and early intervention and because the project seemed like a useful but compact one.

As I was replicating the methodology of two previous service improvement projects, coincidentally with the same external supervisor as for my project (Dr Chris Gillmore), I was able to modify their questionnaires to evaluate change in knowledge and confidence in identifying and asking about psychosis in clients and in making referrals to the EIP team.

Ethical approval was a lot simpler than for my main research project as I was only recruiting from a staff group. I still needed to apply for Department of Psychology ethical approval and for R&D approval from AWP. Once this was

completed I waited for the service to schedule a training session with Project 28, which was the service I had approval to recruit from. However, the attendance at the session was not sufficient and I needed to obtain Chair's approval to recruit from other organisations until I hit my target of 20 participants completing the pre-, post- and follow-up questionnaires. I was fortunate in that I only needed to evaluate a second training session (with Options for Living) to achieve this target. Follow-up questionnaires were received by mid-March 2017 for both services.

Dr Emma Griffith took a 'teach a man to fish' approach with the data analysis and encouraged me to read previous portfolios, the Andy Field textbook and to liaise with statisticians in order to come up with a plan. The plan was largely similar to Walter et al's (2016) analytic plan without the qualitative component due to lack of sufficient qualitative data. I felt like I learned a lot about preparing and checking data before running parametric analyses as a result of this experience.

I completed writing up this project late May 2017 and the service gave me very positive feedback in that they were happy the training had an impact on staff knowledge and confidence and that they would be keen to implement recommendations with a view to improve the training package. I found the process of planning and executing a service improvement project, especially working closely with the team involved, a very rewarding experience, as I was witness to how engaged and enthusiastic they were in the process.

Critical Literature Review Project

My literature review project was the first to be finalised. I approached Dr Ailsa Russell after she presented at the research conference in the first year of my training. I had no previous knowledge or experience in Tourette's syndrome but was keen to explore a project in an avenue other than psychosis as I had a sense that my main research would be in that field. This coupled with Ailsa's expertise in neurodevelopmental disorders made for some interesting discussions as we finalised the question for the review. For the longest time I put my review on the back burner as I got on with getting ideas for my other projects. It was only in the third year when I was waiting for ethical approval or my main project that I made a concerted effort to get my literature review done. I am glad I did this when I did as I have noticed that it is the most difficult project to grapple with in terms of the amount of reading required and the precise record keeping. It is also one of the

projects that some fellow cohort-mates have found most difficult to do having left it until the end.

In hindsight, I wish that I had met more regularly with Ailsa and got feedback for small sections of the project instead of handing it in as a completed project to her. I seemed to have lost my way a bit having somehow abandoned my initial synthesis plan. Ailsa steered me back to staying with the original plan, which required me to rework almost the entire write-up in early June 2017. I was extremely concerned that I would not be able to do this but with Ailsa's reassurance and some very useful feedback, I was able to complete this in time.

Case Studies

Despite not enjoying the time at which case studies were usually due (at the end of placement alongside all the other paperwork!), I really enjoyed writing up pieces of clinical work. I found reviewing the literature and going back to the evidence-base a valuable way of staying true to the model and to improving my clinical practice. I feel like I have gotten better at writing case reports when I look back on my previous ones. Despite the planning involved, I quite enjoyed executing and writing up single-case experimental design studies. In fact, I did a third SCED on my CAMHS placement just because the way the service was structured lent itself very well to designing and executing a SCED and I did not want to waste the opportunity. In retrospect, I am especially pleased I did this as I now have the opportunity to present my CAMHS case study in poster format at the upcoming BABCP conference in Manchester in July 2017.

All my case studies were cognitive-behavioural, in line with my main orientation. The topics covered were:

1. Generalised anxiety in psychosis (WAA)
2. Working with social anxiety and agoraphobia in the context of MUS (OA)
3. Working with relapse in arachnophobia (LD)
4. Social anxiety in a young girl presenting to CAMHS with depression
5. Pain as a precipitating and perpetuating factor in complex trauma (Elective)

I feel like I have worked with varied presentations over the course of my placements and the case reports I have completed reflect this diversity.

Future Aspirations

I hope to use the summer and my time immediately after qualifying to publish as much of my work as possible. I am extremely keen to do this, as I currently have no publications to my name. I would like to prioritise my main research project, service improvement project and CAMHS case study in the first instance followed by my literature review and possibly my complex trauma case study. When I was applying for the DClinPsy at Bath, I found the portfolio form of thesis a very attractive prospect although I did not dream that I would think to publish before I began this course. The ethos of good quality, publishable research is one I have grown to appreciate as I have learnt so much about writing for publication. I look forward to sharing my work with the research and psychology community and hope that it will spark further research ideas. I hope to continue being involved in service improvement projects and in writing up case studies as a qualified clinical psychologist.

Appendices

Critical Literature Review Appendices

Appendix A

Author guidelines

Instructions for Authors

Journal of Child and Family Studies

GENERAL

In general, the journal follows the recommendations of the 2010 Publication Manual of the American Psychological Association (Sixth Edition), and it is suggested that contributors refer to this publication. The research described in the manuscripts should be consistent with generally accepted standards of ethical practice. The anonymity of subjects and participants must be protected and identifying information omitted from the manuscript.

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References should include (in this order):

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Appendix B

Newcastle-Ottawa Scale used for quality assessment of papers

Study number	***Study Name***	***Authors***	***Year***	***Is the case definition adequate a) yes, with independent validation * b) yes, e.g. record linkage or based on self-reports c) no description***	***Representativeness of the cases a) consecutive or obviously representative series of cases * b) potential for selection biases or not stated***	***Selection of controls a) community controls * b) hospital controls c) no description***	***Definition of controls a) no history of disease (endpoint) * b) no description of source***	***Comparability of cases and controls on the basis of the design or analysis a) study controls for _____ __ (Select the most important factor.) * b) study controls for any additional factor * (This criteria could be modified to indicate specific control for a second important factor.)***	***Ascertainment of exposure a) secure record (e.g. surgical records) * b) structured interview where blind to case/control status * c) interview not blinded to case/control status d) written self report or medical record only e) no description***	***Same method of ascertainment for cases and controls a) yes * b) no***	***Non-response rate a) same rate for both groups * b) non respondents described c) rate different and no designation***	***Total***
1	A controlled study of personality and affect in Tourette syndrome	Clare M. Eddy, Hugh E. Rickards, Hugo D. Critchley, Andrea E. Cavanna	2013	Fulfilled the DSM- IV-TR criteria for TS - no other description or indication of independent validation	All patients came from the same specialist clinic (referral bias).	Hospital controls	Healthy controls *	Age *	Interview not blinded and self-report	Yes - Each patient underwent a comprehensive clinical inter- view using the National Hospital Interview Schedule (NHIS) for TS, a psychometric instrument with established inter-rater reliability and	No designation	***

										concurrent validity*		
2	A Controlled Study of Tourette Syndrome. I. Attention-Deficit Disorder, Learning Disorders, and School Problems	David. E. Comings & Brenda G. Comings	1987	The diagnosis of TS was based on the DSM III criteria of (1) onset between 2 and 15 years of age, (2) presence of multiple motor tics, (3) presence of vocal tics, (4) waxing and waning of symptoms, (5) suppressibility of symptoms, and (6) duration of symptoms for >1 year.	All consecutive new TS and ADD patients referred to a psychiatric clinic *	Community controls: The controls were picked randomly from the children of mothers entering the Genetics Clinic of the City of Hope National Medical Center for amniocentesis. *	Healthy controls - children of mothers attending clinic for amniocentesis due to advanced maternal age*	Age *	Interview not blinded	Yes- All subjects were examined prospectively with a 425-item questionnaire based on the Diagnostic Interview Schedule and the Diagnostic and Statistical Manual of Mental Disorders (DSM I)*	No designation	*****
3	A Controlled Study of Tourette Syndrome. III. Phobias and Panic Attacks	David. E. Comings & Brenda G. Comings	1987	The diagnosis of TS was based on the DSM III criteria of (1) onset between 2 and 15 years of age, (2) presence of multiple motor tics, (3) presence of vocal tics, (4) waxing and waning of symptoms, (5) suppressibility of symptoms, and (6) duration of symptoms for >1 year.	All consecutive new TS and ADD patients referred to a psychiatric clinic *	Community controls: The controls were picked randomly from the children of mothers entering the Genetics Clinic of the City of Hope National Medical Center for amniocentesis. *	Healthy controls - children of mothers attending clinic for amniocentesis due to advanced maternal age*	Age *	Interview not blinded	Yes- All subjects were examined prospectively with a 425-item questionnaire based on the Diagnostic Interview Schedule and the Diagnostic and Statistical Manual of Mental Disorders (DSM I)*	No designation	*****

4	A Controlled Study of Tourette Syndrome. II.Conduct	David. E. Comings & Brenda G. Comings	1987	The diagnosis of TS was based on the DSM III criteria of (1) onset between 2 and 15 years of age, (2) presence of multiple motor tics, (3) presence of vocal tics, (4) waxing and waning of symptoms, (5) suppressibility of symptoms, and (6) duration of symptoms for >1 year.	All consecutive new TS and ADD patients referred to a psychiatric clinic *	Community controls: The controls were picked randomly from the children of mothers entering the Genetics Clinic of the City of Hope National Medical Center for amniocentesis. *	Healthy controls - children of mothers attending clinic for amniocentesis due to advanced maternal age*	Age *	Interview not blinded	Yes- All subjects were examined prospectively with a 425-item questionnaire based on the Diagnostic Interview Schedule and the Diagnostic and Statistical Manual of Mental Disorders (DSM I)*	No designation	*****
5	Behavioral and Emotional Problems in Adolescents with Tourette Syndrome	Hsueh-Ling Chang, Hsin-Yi Liang, Hwei-Shioun Wang, Chian-Shan Li, Nai-Chi Ko, & Yuan-Pei Hsu	2008	Forty adolescents with TS were voluntarily recruited from the Pediatric Neurology and Child Psychiatry clinics in a medical center in northern Taiwan. Diagnosis of TS was conducted and confirmed by an experienced child neurologist (HS Wang) and child psychiatrist (HL Chang) based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria. *	Potential for selection biases or not stated	No description	Conducted an interview with the parents before the study to ascertain that none presented a positive history of tics or tic-like symptoms. *	Age* and gender*	Interview not blinded to case/control status	All subjects were assessed using the Wechsler Intelligence Scale for Children (WISC-III)(12) administered by an experienced clinical psychologist (NC Ko). Only subjects with normal IQ (IQ > 79) were recruited for the second stage of the study. *	Rate different and no designation	*****

6	Cognition, Emotion and Behavior in Children with Tourette's Syndrome and Children with ADHD-Combined Subtype—A Two-Year Follow-Up Study	Kjell Tore Hovik, Kerstin J. Plessen, Andrea E. Cavanna, Erik Winther Skogli, Per Normann Andersen, & Merete Øie	2015	All participants underwent a diagnostic assessment based on separate interviews of the participant and parent (s) using the Schedule for Affective Disorders and Schizophrenia for School Age Children/ Present and Lifetime version-2009 (K-SADS-PL). Experienced clinicians familiar with diagnosing children and adolescents with neuropsychiatric disorders conducted the interviews. The initial diagnostic evaluation was supplemented with information from the ADHD Rating Scale IV [52], the Child Behavior Checklist (CBCL) [53], the Autism Spectrum Screening Questionnaire [54], and the Yale Global Tic Severity Scale *	The clinical sample was referred consecutively to the Child and Adolescent Mental Health Centres at Innlandet Hospital Trust (IHT) in Norway in 2009 and 2010. *	From schools *	Typically developing children from local schools *	Gender*	Interview not blinded to case/control status	All participants underwent a diagnostic assessment based on separate interviews of the participant and parent (s) using the Schedule for Affective Disorders and Schizophrenia for School Age Children/ Present and Lifetime version-2009 (K-SADS-PL) *	The same participants were followed up at T1 and T2 with no drop- outs. *	****** *

7	Emotional development in children with tics: a longitudinal population-based study	P. J. Hoekstra, A. J. Lundervold, S. A. Lie, C. Gillberg, Kerstin J. Plessen	2013	The identification of tics was based solely on a screening questionnaire and not confirmed by observation or direct examination, which may limit the validity of the symptoms of interest and which may imply that some children with tics have not been identified.	Obviously representative series of cases *	Community controls *	No history of disease*	Gender and school grade **	Interview not blinded and self-report	Yes*	No designation	******
8	Interpersonal reactivity differences in Tourette syndrome	Clare M. Eddy, Antonella Macerollo, Davide Martino, Andrea E. Cavanna	2015	TS according to DSMV criteria	Limitation is that the sample of patients was from a single specialist outpatient clinic.	No description	60 healthy controls (30 females, 30 males) recruited through BSMHFT and University of Birmingham *	Age* and gender*	Interview not blinded	The Interpersonal Reactivity Index was completed by 95 adults with TS according to DSMV criteria (30 females, 65 males) and 60 healthy controls (30 females, 30 males) recruited through BSMHFT and University of Birmingham. *	No designation	****
9	Is onset of Tourette syndrome influenced by life events?	Netta Horesh, Sharon Zimmerman, Tami Steinberg, Haim Yagan, Alan Apter	2008	DSM IV diagnosis for TS	The subjects with TS and OCD were referred consecutively to the TS and OCD clinics, respectively, of a university- affiliated children's hospital. *	The controls were recruited from the catchment area by advertisement *	Healthy controls *	Age *	Interview not blinded and self-report	All children were tested with the Screen for Child Anxiety Related Emotional Disorders, Children's Yale Brown Obsessive Compulsive Scale, Beck Depression Inventory or Children's Depression	No designation	*****

										Inventory, the Life Experience Survey, and the Junior Temperament and Character Inventory. *		
10	Judgements of social inappropriateness in adults with Tourette's syndrome	Shelley Channon, Helena Drury, Leonie Gafson, Jeremy Stern & Mary M. Robertson	2012	Twenty participants (15 male, five female) who met criteria for TS-alone, i.e., TS without comorbid disorders were recruited from a specialist clinic, and met DSM-IV-TR (American Psychiatric Association, 2000) criteria for TS	not stated	university research participant pool by advertisement	healthy controls *	age*, years of education and IQ *	interview not blinded and self-report	The Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 2002) was used to screen all participants for psychiatric disorders, with additional questions relating to ADHD, which is not addressed by the SCID. *	no designation	****
11	Measuring Anger Expression in Young Patients With Tourette Syndrome	Andrea E. Cavanna, Claudia Selvini, Chiara Luoni, Clare M. Eddy, Fizzah Ali, Rosanna Blangiardo, Emanuela Gagliardi, Umberto Balottin & Cristiano Termine	2015	Participants were recruited in accordance with DSM-IV-TR criteria for TS (APA, 2000). Neurological examination, electroencephalography, brain magnetic resonance imaging, and standard laboratory tests were used to exclude the possibility of alternative causes of tics. *	sample population was drawn from all consecutive outpatients consulting our specialist Tourette clinic during 2005–2012 at the Department of Child and Adolescent Psychiatry (University of Pavia) and Child Neuropsychiatry Unit (University of Varese), Italy.*	controls recruited from pool of 250 potential control subjects enlisted from local schools *	None had a personal or family neuropsychiatric history. *	age and gender **	interview not blinded and self-report	Twenty-five patients diagnosed with TS and 41 healthy controls completed the State-Trait Anger Expression Inventory (STAXI). *	no designation	****** *

12	Peer Victimization in Youth with Tourette's Syndrome and Chronic Tic Disorder: Relations with Tic Severity and Internalizing Symptoms	Eric A. Storch & Tanya K. Murphy & Rhea M. Chase & Mary Keeley & Wayne K. Goodman & Maurice Murray & Gary R. Geffken	2007	TS or chronic tic disorder and comorbid diagnoses were made by a board certified child psychiatrist with 10 years of experience by using all available clinical information (Leckman et al. 1982). This method, which is considered the gold standard for diagnosis, incorporates information from the Yale Global Tic Severity Scale (YGTSS; Leckman et al. 1989), clinical interview, and responses to other measures. Tic diagnoses were also confirmed by one of two licensed clinical psychologists with extensive experience based on a discussion of symptoms and viewing relevant quantitative data. *	Children and adolescents diagnosed with TS or a chronic tic disorder (n = 59; boys = 41) seen between January 2004 and November 2005 for outpatient visits in the University of Florida Department of Psychiatry Child and Adolescent OCD and Tic Clinic *	Children and adolescents attending well-child visits to their pediatrician *	healthy controls *	age * (matched) and gender *(controlled for)	interview not blinded	Children with T1 D or without a chronic illness only completed the peer victimization measure *	no designation	****** *
13	Psychosocial stress predicts future symptom severities in children and adolescents with Tourette	Haiqun Lin, Liliya Katsovich, Musie Ghebremichael, Diane B. Findley, Heidi Grantz, Paul	2007	Expert clinicians using DSM-IV criteria made all psychiatric diagnoses based on all available information *	Demographically homogeneous sample of clinically referred TS and OCD patients and might not extrapolate to other populations.	no description	healthy controls *	age (controlled for)*	interview not blinded and self-report	Consecutive ratings of tic, OC and depressive symptom severity were obtained for 45 cases and 41 matched healthy control subjects over a two-year period.	no designation	****

	syndrome and/or obsessive-compulsive disorder	J. Lombroso, Robert A. King, Heping Zhang, and James F. Leckman								Measures of psychosocial stress included youth self-report, parental report, and clinician ratings of long-term contextual threat. *		
14	Social and Emotional Adjustment in Children Affected with Gilles de la Tourette's Syndrome: Associations with ADHD and Family Functioning	Alice S. Carter, Deborah A. O'Donnell, Robert T. Schultz, James F. Leckman and David L. Pauls	2000	Two experienced clinicians employed a best-estimate diagnostic procedure (Leckman, Sholomskas, Thompson, Belanger, & Weissman, 1982) to assign the following diagnoses: TS, chronic motor tics, chronic vocal tics, OCD, ADHD, oppositional defiant disorder, conduct disorder, and other major psychiatric disorders. In addition, each clinician rated the number of DSM-III-R ADHD diagnostic criteria that the child met. *	potential for selection biases or not stated	Unaffected control children were recruited through newspaper advertisements and announcements within the university and at area schools.*	Control children were screened to ensure that they did not meet lifetime criteria for any psychiatric illness or learning disability. *	age, gender, grade **	interview not blinded and self-report	All children were administered a comprehensive neuro- psychological and social-emotional assessment battery, in a consistent order, across two 2-hour visits. *	no designation	******
15	Suicidal Thoughts and Behaviors in Children and Adolescents with Chronic Tic Disorders	Eric A. Storch, Camille E. Hanks, Jonathan W. Mink, Joseph F. McGuire, Heather R. Adams,	2015	A diagnosis of TS or CTD1 based on Diagnostic and Statistical Manual for Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) criteria established by an expert clinician using consensus	Recruited from the normal patient flow at two specialty clinics: the University of South Florida (USF, n = 104) and the University of Rochester (UR, n = 92). The	community controls *	Inclusion criterion for community controls was that youth did not have a history of tics or a first-degree	age *	interview not blinded and self-report	yes*	no designation	*****

		Erika F. Augustine, Amy Vierhile, Alyssa Thatcher, Rebecca Bitsko, Adam B. Lewin, and Tanya K. Murphy		procedures *	treatment-seeking nature and sociodemographic characteristics (e.g., primarily Caucasian, male subjects) of the sample potentially limit results' generality.		relative with TS. *					
16	The Emotional adjustment of children with Tourette's syndrome	Barbabra H Edell, Robert W Motta	1989	no independent validation	not stated	no description	no past or current history of psychiatric diagnoses *	age, sex, race **	interview not blinded and self-report	yes*	no designation	****
17	The Impact of Tic Severity, Comorbidity and Peer Attachment on Quality of Life Outcomes and Functioning in Tourette's Syndrome: Parental Perspectives	Deirdre O'Hare, Edward Helmes, Valsamma Eapen, Rachel Grove, Kerry McBain, John Reece	2016	Formally diagnosed with TS by a medical practitioner. *	To minimise ascertainment bias inherent in TS studies employing clinic- based samples, the current study recruited a nation-wide community sample. *	no description	no known psychiatric or medical diagnosis *	age and gender **	interview not blinded and self-report	yes*	Response rate could not be calculated for the TS group due to restricted information maintained on member data-bases. Inability to accurately record survey distribution for controls over multiple Australia-	******

											wide locations precluded response rate calculation.	
18	Tourette Syndrome and Comorbid Conditions: A Spectrum of Different Severities and Complexities	Renata Rizzo, Mariangela Gulisano, Alessandra Pellico, Paola Valeria Cali, and Paolo Curatolo	2014	A paediatric neurologist with extensive experience made the diagnoses of Tourette syndrome and other clinical conditions in accordance with the Diagnostic and Statistical Manual of Mental Disorders IV-Text Revision criteria. All patients with Tourette syndrome were initially assessed during semi-structured interviews according to the National Hospital Interview Schedule for Gilles de la Tourette syndrome. *	not stated	from local schools *	healthy controls *	age *	interview not blinded and self-report	Patients with Tourette syndrome and healthy controls completed the Wechsler Intelligence Scale for Children–III, the Youth Quality of Life Instrument–Research Version, the Multidimensional Anxiety Scale for Children, the Children's Depression Inventory, the Conner's ADHD/DSMV-IV Scale, and the Child Behavior Checklist. *	no designation	*****
19	Tourette syndrome is associated with insecure attachment and higher aggression	Sandra Dehning, Max B. Burger, Daniela Krause, Andrea Jobst, Elena Yundina, Norbert Müller, Sebastian Meyer, Peter	2015	Diagnosis was confirmed at the time of the study by two experienced psychiatrists on the basis of ICD-10 criteria. *	not stated	Recruited from the general population by advertisements placed on notice boards. *	healthy controls *	age and sex-matched control **	interview not blinded and self-report	yes*	no designation	******

		Zill, and Anna Buchheim										
20	Tourette Syndrome: Relation To Children's and Parents' Self-Concepts	Barbara H. Edellfisher and Robert W. Motta	1990	record linkage	not stated	no description	healthy controls *	age, sex, and socioeconomic status **	interview not blinded and self-report	yes*	no designation	****

Appendix C

Second reviewer's table

Authors	Year	Title	Include/exclude/unsure (2nd reviewer)	Reason for exclusion (2nd reviewer)	Reason for inclusion (2nd reviewer)
Lin et al.	2007	Psychosocial Stress Predicts Future Symptom Severities In Children And Adolescents With Tourette Syndrome And/or Obsessive-Compulsive Disorder	Include		Longitudinal Children and adolescents Healthy control Standardised measures of psychosocial stress Diagnosis of TS
Woodrich and Thull	1997	Childhood Tourette's Syndrome And The Thematic Apperception Test: Is There A Recognizable Pattern?	Exclude	No measure of social/ emotion functioning Poor reliability	Diagnosis of TS Matched controls
Kano et al.	2008	Rage Attacks And Aggressive Symptoms In Japanese Adolescents With Tourette Syndrome	Exclude	No non-TS control group, but comparison between TS groups.	
Neal and Cavanna	2013	"Not just right experiences" in patients with Tourette syndrome: Complex motor tics or compulsions?	Exclude	Comparison groups = TS +OCD/OCS TS without OCD No non-TS control group.	
Robinson et al.	2013	Tourette syndrome, parenting aggravation, and the contribution of co-occurring conditions among a nationally representative sample	Exclude	No diagnosis of TS Crude measurement – not standardised	
Channon et al.	2004	Social Cognition in Tourette's Syndrome: Intact Theory of Mind and Impaired Inhibitory Functioning	Exclude	Measure of ToM, not social functioning	
Ricketts et al.	2016	Pilot Open Case Series of Voice over Internet Protocol-Delivered Assessment and Behaviour Therapy for Chronic Tic Disorders	Exclude	No control group	
Drury et al.	2012	Emotional processing and executive functioning in children and adults with Tourette's syndrome	Exclude	Measures of emotion perception not emotional functioning	

Service Improvement Project Appendices

Appendix D

Author guidelines for target journal

Taylor & Francis quick layout guide

Please follow any specific Instructions for Authors provided by the Editor of the journal, which are available on the journal pages at **www.tandfonline.com**.

Please also see our guidance on **putting your article together**, **defining authorship** and **anonymizing your article** for peer review.

We recommend that you use our **templates** to prepare your article, but if you prefer not to use templates this guide will help you prepare your article for review. If your article is accepted for publication, the manuscript will be copyedited and typeset in the correct style for the journal.

Font: Times New Roman, 12 point, double-line spaced. Use margins of at least 2.5 cm (or 1 inch). Guidance on how to insert special characters, accents and diacritics is available **here**.

Title: Use bold for your article title, with an initial capital letter for any proper nouns.

Abstract: Indicate the abstract paragraph with a heading or by reducing the font size. Check whether the journal requires a structured abstract or graphical abstract by reading the Instructions for Authors. The Instructions for Authors may also give word limits for your abstract. Advice on writing abstracts is available **here**.

Keywords: Please provide keywords to help readers find your article. If the Instructions for Authors do not give a number of keywords to provide, please give five or six. Advice on selecting suitable keywords is available **here**.

Headings: Please indicate the level of the section headings in your article:

1. First-level headings (e.g. Introduction, Conclusion) should be in bold, with an initial capital letter for any proper nouns.
2. Second-level headings should be in bold italics, with an initial capital letter for any proper nouns.
3. Third-level headings should be in italics, with an initial capital letter for any proper nouns.
4. Fourth-level headings should be in bold italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.
5. Fifth-level headings should be in italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.

Tables and figures: Indicate in the text where the tables and figures should appear, for example by inserting [Table 1 near here]. The actual tables should be supplied either at the end of the text or in a separate file. The actual figures should be supplied as separate files. The journal Editor's preference will be detailed in the Instructions for Authors or in the guidance on the submission system. Ensure you have permission to use any tables or figures you are reproducing from another source.

- Advice on obtaining permission for third party material is available **here**.
- Advice on preparation of artwork is available **here**.
- Advice on tables is available **here**.

Running heads and **received dates** are not required when submitting a manuscript for review; they will be added during the production process.

Spelling and punctuation: Each journal will have a preference for spelling and punctuation, which is detailed in the Instructions for Authors. Please ensure whichever spelling and punctuation style you use is applied consistently.

If you have any queries…

If you need further advice, please contact us at **authorqueries@tandf.co.uk** giving the full title of the journal to which you are planning to submit, or see our **Author Services website**.

Appendix E

Ethical approval for SIP

psychology-ethics 15 July 2016 at 15:05

Re: Ethics 16-168

To: Taruna Jamalamadaka

Dear Taruna P Jamalamadaka,

Reference number 16-168: Evaluation of a training program that aims to promote early-detection of psychosis in young people

The ethics committee have considered your application for the study above and have given it full ethical approval.

Best wishes with your research.

Dr Michael J Proulx
Chair, Psychology Research Ethics Committee

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Avon and Wiltshire Mental Health Partnership AWP Trust
AWP Quality Academy
Fromeside- East Wing
Manor Road
Fishponds
BS16 2EW

0117 378 4238/ 07825 725296

Taruna P Jamalamadaka,
Trainee Clinical Psychologist,
tj340@bath.ac.uk

Date: 14th June 2016

Dear Taruna

An evaluation of a tailored training program, provided by the Bath and North East Somerset (B&NES) Early Intervention in Psychosis (EIP) Service, that aims to promote early-detection of ultra-high risk of psychosis in young people.

AWP Reference: E2016.019 Jamalamadaka, Taruna

This letter is to confirm that your evaluation is now approved and also provides you with our reference number.

If you do need any further support or information, please contact us using the contact details above, quoting our reference number for your study.

The importance of disseminating all evaluation work cannot be over emphasised. It is only by sharing our learning that we can improve services across AWP. For this reason, the findings of all evaluation work should be reported to the Evaluation team via email. The team will champion the results of service evaluations, and work with evaluators to ensure those results are disseminated and acted upon, and that the results of evaluations are reflected in future service delivery. The team will also work with evaluators to produce publications for the public domain.

I very much look forward to receiving the results of your evaluation in due course.

Yours sincerely,

Janet Brandling

Appendix F

Information sheet and consent form

Information Sheet

An evaluation of a tailored training program, provided by the Bath and North East Somerset (B&NES) Early Intervention in Psychosis (EIP) Service, that aims to promote early-detection of psychosis in young people.

You are being invited to take part in a service improvement project. The following information sheet gives details about the overall project and explains what will be involved if you choose to participate. Please read this sheet carefully before deciding whether you would like to take part. If you have any questions, please contact the main researcher, Taruna Jamalamadaka, at tj340@bath.ac.uk

What is the purpose of this study?

This service improvement project seeks to understand current knowledge and confidence of staff in identifying the early warning signs of psychosis in young people and to re-evaluate this after the provision of a tailored training programme offered by the Early Intervention in Psychosis (EIP) team in Bath. The training hopes to

1. Improve staffs' understanding of the referrals process for the EIP, and
2. Improve staffs' skills and knowledge in identifying those who are at risk of developing psychosis.

What will be asked of me if I take part?

You will be invited to:

- Fill out a questionnaire before the training session
- Attend the training session
- Fill out a questionnaire after you have attended the training session
- Fill out a final follow-up questionnaire three months after the training session

The whole process including the training should not take more than a total of two hours.

Are there any risks to taking part?

There are no foreseen risks of taking part in this study.

Are there any benefits to taking part?

This project hopes to improve staff confidence and knowledge about the early warning signs of psychosis in the young people with whom they work. It is therefore hoped that clients who attend the service will benefit from increased staff knowledge. Although participation

in this will help inform the improvement and modification of the training, there are no direct benefits of participation at this stage.

Will my responses be kept confidential?

This study will not involve the disclosure of any personal information. All information gained from questionnaires will be anonymised and kept confidential.

What happens to my responses after the study?

Data will be stored in accordance with the Data Protection Act (1998). This information will be stored for a maximum of 5 years after completion of the study. After this time all paper information will be shredded and only anonymous numerical data will be retained.

What happens to the results of the study?

The results of this project will be fed back to the larger Early Intervention in Psychosis team in addition to discussions with the Early Intervention Practitioner and Team Manager. This project will also be written up and submitted as part of the requirements for the Doctorate in Clinical Psychology at the University of Bath and will be submitted as part of the research portfolio for the completion of this doctorate by the first author. Furthermore, the results may be submitted for publication to disseminate the results to a wider audience.

Who can I contact if I have questions?

The main researcher should be the first point of call:

Email Taruna Jamalamadaka on tj340@bath.ac.uk

The second researcher can also be contacted:

Email Dr Chris Gillmore on chris.gillmore@nhs.net

The Academic supervisor can also be contacted to discuss the project:

Email Dr Emma Griffith on e.j.Griffith@bath.ac.uk

Consent form

Participant Identification Number: _____

RESEARCH CONSENT FORM

Title of Project:

Name of Project Coordinators: Taruna Jamalamadaka, University of Bath
Dr Emma Griffith, University of Bath
Dr Chris Gillmore, B&NES Therapies Team

Please initial each white box to indicate you have read and agreed to points below

1. I confirm that I have read and understand the information sheet dated ..... for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without my medical care of legal rights being affected. ☐
3. I understand that my data will be anonymised and securely stored in accordance with the Data Protection Act (1998). ☐
4. I understand that the responses I provide will be used to audit staffs' confidence and knowledge of working with clients with psychosis and to inform the improvement of the training offered by the Early Intervention Service in Bath. ☐
5. I understand that the data I provide will be written up into an anonymised report that will be submitted for assessment as part of the project coordinator's Doctorate in Clinical Psychology, and if suitable, to a peer review journal for publication. ☐
6. I give my permission for the results of this study to be verified by other researchers at the University of Bath, which would require them to access my anonymised data. ☐
7. I agree to attend the training session and complete the questionnaires for the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

Appendix G

Pre- , post-, and follow-up questionnaires

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NHS Avon and Wiltshire Mental Health Partnership NHS Trust

Pre Training Questionnaire

Thank you for agreeing to participate in a training session on the early detection of psychosis training that is being provided by the Bath Early Intervention in Psychosis Service. To assess base-line perceptions of this area and support evaluation of the training, please take the time to read and complete the following questions. Please answer as honestly as possible to provide thorough evaluation.

Your name:
Your role within the service:
How long have you been with the service?:

To your knowledge, roughly how many clients do you have on your current caseload?

❍ 0-5 ❍ 6-10 ❍ 11-15 ❍ 16-20 ❍ Over 20 ❍ Don't know

To your knowledge, roughly how many clients on your caseload have you enquired about psychosis?

❍ 0-5 ❍ 6-10 ❍ 11-15 ❍ 16-20 ❍ Over 20 ❍ Don't know

To your knowledge, roughly how many referrals have you made previously to the Early Intervention in Psychosis Service?

❍ 0-5 ❍ 6-10 ❍ 11-15 ❍ 16-20 ❍ Over 20 ❍ Don't know

Please indicate your impressions of your knowledge and confidence of the following items:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I would know how to recognise the symptoms of psychosis in a client.	❍	❍	❍	❍	❍
2. If I suspected that a client was experiencing the symptoms of psychosis, I would know how to ask about it.	❍	❍	❍	❍	❍
3. I understand what "at-risk" mental state means	❍	❍	❍	❍	❍

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NHS Avon and Wiltshire Mental Health Partnership NHS Trust

4. I know what is meant by early warning signs of psychosis	❍	❍	❍	❍	❍
5. I know what services are available for clients experiencing psychosis	❍	❍	❍	❍	❍
6. I would know how to refer someone who was at risk of experiencing psychosis	❍	❍	❍	❍	❍

7. Overall how confident do you feel about asking about the signs of psychosis?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

8. Overall how confident do you feel about referring a client to the Early Intervention in Psychosis Service?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

9. What are your hopes for this training session?

10. What are your personal barriers to asking about psychosis with your clients?

11. What would help you to feel more confident in this area of work?

12. Any other comments?

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NHS
Avon and Wiltshire
Mental Health Partnership NHS Trust

Post Training Questionnaire

Thank you for completing the training session on the early detection of psychosis training that is being provided by the Bath Early Intervention in Psychosis Service. To evaluate its initial impact please take the time to read and complete the following questions. Please answer as honestly as possible to provide thorough evaluation.

Please indicate your impressions of your knowledge and confidence of the following items:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I would know how to recognise the symptoms of psychosis in a client.	❍	❍	❍	❍	❍
2. If I suspected that a client was experiencing the symptoms of psychosis, I would know how to ask about it.	❍	❍	❍	❍	❍
3. I understand what "at-risk" mental state means	❍	❍	❍	❍	❍
4. I know what is meant by early warning signs of psychosis	❍	❍	❍	❍	❍
5. I know what services are available for clients experiencing psychosis	❍	❍	❍	❍	❍
6. I would know how to refer someone who was at risk of experiencing psychosis	❍	❍	❍	❍	❍

7. Overall how confident do you feel about asking about the signs of psychosis?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

8. Overall how confident do you feel about referring a client to the Early Intervention in Psychosis Service?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

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Mental Health Partnership NHS Trust

9. Has the training helped you become more confident in working with psychosis?

a. Yes	No
❍	❍

If yes please provide details

10. Is optional on-going consultation (that provides support to staff and supervision on complex cases) something that interests you?

Yes	No
❍	❍

11. What do you feel has been the most helpful aspect of this training for your work with clients?

12. Any other comments?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

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Follow up Questionnaire

Welcome!

Around 3 months ago you completed a training session on the early detection of psychosis that was provided by the Bath Early Intervention in Psychosis Service. You very helpfully completed some questionnaires and consented to completing some follow up questionnaires.

To evaluate the impact of the training over time please take the time to read and complete the following questions.

Please answer as honestly as possible to provide thorough evaluation and help develop goals for the future. Please answer all questions.

1. Your name: _____

2. Your role within the service: _____

3. How long have you been with the service? _____

4. To your knowledge, roughly how many clients on your caseload have you enquired about psychosis?

❍ 0-5 ❍ 6-10 ❍ 11-15 ❍ 16-20 ❍ Over 20 ❍ Don't know

5. To your knowledge, roughly how many referrals have you made to the Early Intervention in Psychosis Service?

❍ 0-5 ❍ 6-10 ❍ 11-15 ❍ 16-20 ❍ Over 20 ❍ Don't know

6. Please indicate your impressions of your knowledge and confidence of the following items:

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
i.	I would know how to recognise the symptoms of psychosis in a client.	❍	❍	❍	❍	❍
ii.	If I suspected that a client was experiencing the symptoms of psychosis, I would know how to ask about it.	❍	❍	❍	❍	❍

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
iii.	I understand what "at-risk" mental state means	❍	❍	❍	❍	❍
iv.	I know what is meant by early warning signs of psychosis	❍	❍	❍	❍	❍
v.	I know what services are available for clients experiencing psychosis	❍	❍	❍	❍	❍
vi.	I would know how to refer someone who was at risk of experiencing psychosis	❍	❍	❍	❍	❍

7. Overall how confident do you feel about asking about the signs of psychosis?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

8. Overall how confident do you feel about recognising psychosis as the primary problem and referring to the Early Intervention in Psychosis Service?

Extremely	Very	Neutral	Not Very	Not at all
❍	❍	❍	❍	❍

9. Has the training helped you become more confident in identifying the signs of psychosis?

a. Yes ❍ No ❍

b. If **yes**, tell us **how it has helped you** become more confident in identifying the signs of psychosis

c. If **no**, tell us **why it has not helped** you become more confident in identifying the signs of psychosis

10. What do you feel has been the most helpful aspect of this training for your work with clients?

11. Was the optional on-going consultation that provides support to staff and supervision on complex cases utilized?

    a. Yes ❍ No ❍

    b. If yes, please tell us below what was helpful about the consultation

    c. If no, please tell us below what were the barriers to using the consultation

12. What would help you to be able to access the optional consultation?

13. Any other comments?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

Appendix H

Individual item scores

Table showing total knowledge scores

	Scores		
Participant	Pre-training	Post-training	Follow-up
1	12.00	17.00	17.00
2	16.00	18.00	20.00
3	14.00	12.00	18.00
4	14.00	18.00	22.00
5	13.00	16.00	12.00
6	12.00	21.00	18.00
7	16.00	19.00	19.00
8	18.00	24.00	22.00
9	9.00	20.00	18.00
10	17.00	20.00	20.00
11	14.00	17.00	18.00
12	14.00	21.00	16.00
13	18.00	18.00	20.00
14	15.00	24.00	20.00
15	14.00	22.00	16.00
16	8.00	18.00	14.00
17	15.00	19.00	17.00
18	20.00	22.00	24.00
19	15.00	12.00	16.00
20	19.00	22.00	21.00
21	20.00	20.00	19.00
22	5.00	18.00	18.00

Table showing total confidence scores

	Scores		
Participant	Pre-training	Post-training	Follow-up
1	4.00	5.00	5.00
2	4.00	6.00	6.00
3	6.00	6.00	6.00
4	3.00	5.00	6.00
5	4.00	4.00	3.00
6	4.00	6.00	4.00
7	5.00	7.00	5.00
8	5.00	7.00	6.00
9	4.00	6.00	6.00
10	6.00	7.00	7.00
11	4.00	5.00	4.00
12	5.00	6.00	5.00
13	6.00	6.00	7.00
14	6.00	8.00	6.00
15	4.00	6.00	4.00
16	1.00	5.00	4.00
17	5.00	7.00	6.00
18	7.00	7.00	6.00
19	4.00	4.00	5.00
20	6.00	7.00	7.00
21	6.00	6.00	7.00
22	2.00	5.00	4.00

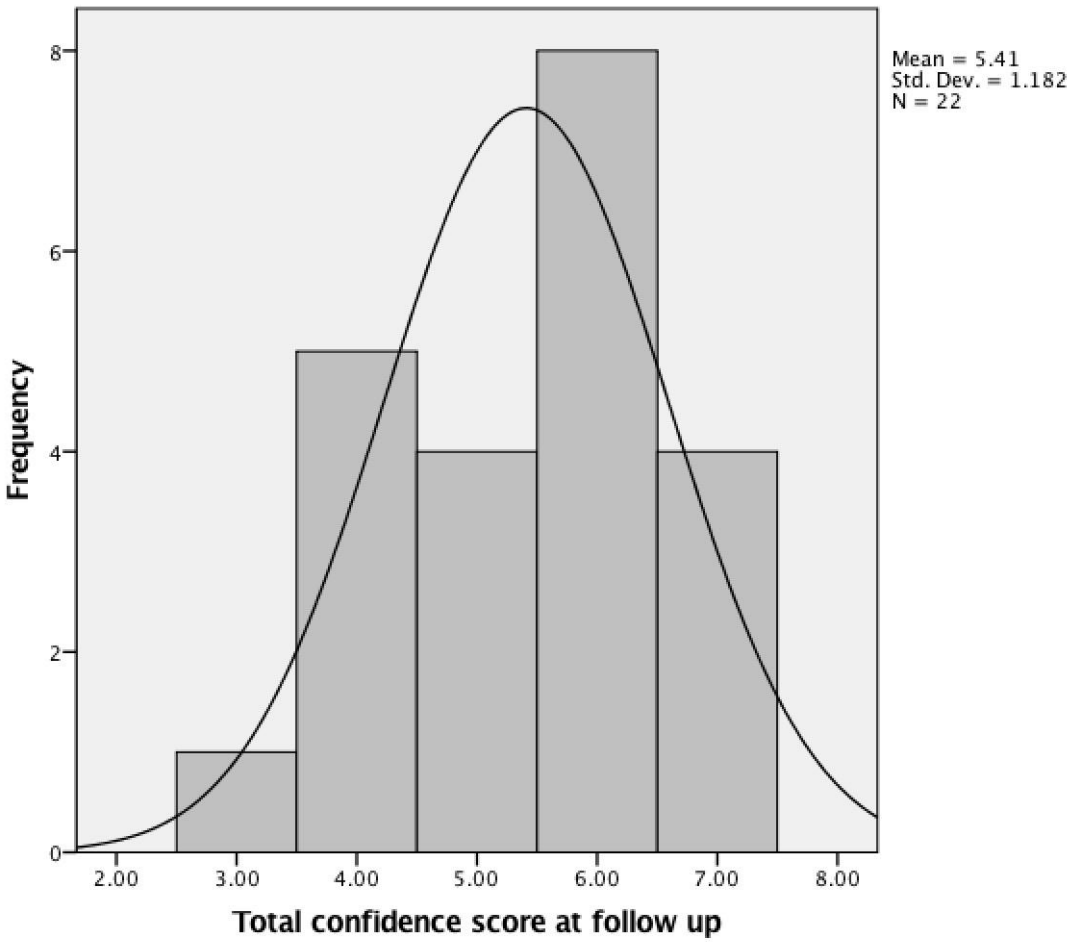
Appendix I

Tests of normality

Table showing tests of normality for pre-, post-, and follow-up data

	Total knowledge score			Total confidence score		
	Pre	Post	Follow-up	Pre	Post	Follow-up
Shapiro-Wilk Statistic	.941	.935	.978	.912	.920	.899
df	22	22	22	22	22	22
Sig.	.211	.155	.874	.052	.074	.028
Skewness	-.755	-.645	-.244	-.678	-.177	-.333
Std. Error of Skewness	.491	.491	.491	.491	.491	.491
Skewness z score	-1.54	-1.31	-0.5	-1.38	-0.36	-0.68
Between ± 1.96	Yes	Yes	Yes	Yes	Yes	Yes
Kurtosis	.803	.686	.535	.634	-.403	-.876
Std. Error of Kurtosis	.953	.953	.953	.953	.953	.953
Kurtosis z score	0.84	0.72	0.56	0.66	-0.42	-0.92
Between ± 1.96	Yes	Yes	Yes	Yes	Yes	Yes

Histogram of total confidence scores at follow-up



Appendix J

Hearing Voices Simulation Exercise (Coleman, 2011)

The following exercise was developed by Ron Coleman as a way to simulate what it is like to hear voices and was developed to try to give mental health workers and relatives some insight into what it is like to hear intrusive, negative and commanding voices.

1. Form a group of three people, the first person takes the part of the "voice", the second as the voice hearer, the third a person with whom the voice hearer is conducting a "real" conversation. The "voice" positions him or herself close to one the ears of the voice hearer whilst the other two face each other seated on chairs. There can be a number of threesomes carrying out this exercise at the same time
2. For two minutes the "voice" talks to the voice hearer whilst at the same time the voice hearer conducts a conversation with the third person. The "voice" is instructed to make personal and belittling remarks to the hearer in a clear voice and to try to engage the attention of the voice hearer. At the end of two minutes the three switch roles until everyone has experienced being a voice hearer.
3. At the end of the exercise the threesomes are brought together and are asked to describe what it felt like to hear voices (i.e. confusion, frustration, annoyance, anger, depression, weariness) how it affected their ability to hold a conversation (i.e. loss of attention and concentration) what strategies they employed to reduce the intrusion of the voice (i.e. trying to ignore it, answering back, changing physical position). Other questions include asking what they would feel and do if the voice was permanent? (depression, suicidal feelings, a desire to avoid people, to hide away, to talk to the voice more). Conversely also ask what they thought about trying to conduct a conversation with someone who is hearing a voice (and being a voice!).
4. List all the points raised by the participants and then compare them with those described in the three phases of voice hearing, it is often the case that non-voice hearers list exactly the same symptoms and ways of trying to respond.

Main Research Project Appendices

Appendix K

Author Guidelines

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

All papers published in The British Journal of Clinical Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

The following types of paper are invited:

• Papers reporting original empirical investigations

• Theoretical papers, provided that these are sufficiently related to the empirical data

• Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications

• Brief reports and comments

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

The word limit for papers submitted for consideration to BJCP is 5000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editors before submission of the paper.

3. Submission and reviewing

All manuscripts must be submitted via Editorial Manager. The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the terms and conditions of submission and the declaration of competing interests. You may also like to use the Submission Checklist to help you prepare your paper.

4. Manuscript requirements

• Contributions must be typed in double spacing with wide margins. All sheets must be numbered.

• Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. You may like to use this template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the Credit website for a list of roles.

• The main document must be anonymous. Please do not mention the authors' names or affiliations (including in the Method section) and refer to any previous work in the third person.

• Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.

• Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.

• All papers must include a structured abstract of up to 250 words under the headings: Objectives, Methods, Results, Conclusions. Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.

• All Articles must include Practitioner Points – these are 2–4 bullet points to detail the positive clinical implications of the work, with a further 2–4 bullet points outlining cautions or limitations of the study. They should be placed below the abstract, with the heading 'Practitioner Points'.

• For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.

• SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.

• In normal circumstances, effect size should be incorporated.

• Authors are requested to avoid the use of sexist language.

• Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright. For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association.
If you need more information about submitting your manuscript for publication, please email Melanie Seddon, Managing Editor (bjc@wiley.com) or phone +44 (0) 1243 770 108.
5. Brief reports and comments

These allow publication of research studies and theoretical, critical or review comments with an essential contribution to make. They should be limited to 2000 words, including references. The abstract should not exceed 120 words and should be structured under these headings: Objective, Method, Results, Conclusions. There should be no more than one table or figure, which should only be included if it conveys information more efficiently than the text. Title, author name and address are not included in the word limit.

6. Supporting Information

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Appendix L

Participant Information Sheet – Healthy Controls

Version 1: Participant information sheet
Healthy controls
18/11/2016

IRAS Project ID: 216534

Participant Information Sheet

We would like you to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Title of Project

How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?

Why is this study being done?

People sometimes have concerns about their mental health. This could especially be true in the case of people who have previously experienced mental health problems, who might be concerned that they may become ill again. We are interested in understanding the different ways people react to ideas about their mental health.

We would also like to understand how people who have never experienced mental illness react to ideas and thoughts about mental health problems, which is why you are being asked to participate in this study.

Do I have to take part?

You do not have to take part in the study. If you decide to take part and then later change your mind, you can ask for your data to be destroyed, provided this is before the study is published (without any information that can identify you). Taking part, or otherwise, in the study will not affect the treatment that you might be currently receiving or might receive in the future.

What will I be asked to do if I take part?

1. If you have never experienced a mental health problem and are happy to take part we will ask you to sign a consent form and complete a questionnaire pack. This will take approximately 30 minutes to fill in.
2. The questionnaire pack can be completed in one of the following ways:
    - Face-to-face with the main researcher (Taruna),
    - At home and sent back to us in a freepost envelope, or
    - Online

Where will the study take place?

We can support you to complete the questionnaires (should you prefer this) at an NHS location convenient to you (e.g., your GP surgery). The questionnaires can also be sent

to an address you provide us with a freepost return envelope included. Alternatively, we can send you a web link to the questionnaire pack.

Will my experiences and reports be kept confidential?

Yes. All information collected about you during the course of the research will be kept confidential. This means that all information will be locked away or password protected with access restricted to study personnel and any information about you will have your name and address removed so that you cannot be identified from it. Only in exceptional circumstances where a risk to yourself or another person requires action might confidentiality need to be broken in which case we will discuss this with you before doing anything.

We will report our findings in academic/health related journals and present them to relevant health professionals at meetings and conferences. The findings will also contribute to Taruna Jamalamadaka's Doctorate in Clinical Psychology. You will not be identified in any reports or publications arising from the study.

Are there any advantages/benefits from taking part?

We cannot promise the study will help you directly but the information collected from you and other participants may help to improve our understanding of fear of illness recurrence. A further benefit of this type of research will be to inform the way service users and clinicians try to deal with worries about a mental illness recurring.

You will also receive a £5 LovetoShop voucher as a thank you for participating in the study.

Are there any disadvantages/risks from taking part?

We consider there to be minimal disadvantages e.g. the inconvenience of a meeting and completing the questionnaires. However, the meeting will be arranged at a time and place that it suitable for you and you can complete the questionnaires in your own time.

While this is very unlikely, should you become upset at any point during the study please inform Taruna, the main researcher (who is a final year Clinical Psychologist in training) in the first instance, and she will be able to offer you some support, or signpost you to support, should this be needed. Taruna will be able to consult with her field supervisor who is an experienced Clinical Psychologist, if necessary. If you become very distressed Taruna will seek your permission to inform your GP.

This study has been approved by the University of Bath Ethics Committee and the Health Research Authority (ref:): 17/LO/0068

What if there is a problem?

If you have any concerns or wish to complain about any aspect of the way you have been approached or treated as part of this study, you should initially contact the researchers, Taruna Jamalamadaka, Professor Paul Salkovskis, Dr Emma Griffith or Dr Hannah Steer who will do their best to answer your questions. Their contact details are provided at the end of this information sheet. If you remain unhappy and wish to

complain formally, you can do by contacting the University of Bath Secretary, Mark Humphriss, on 01225 386 212 or universitysec@bath.ac.uk.

Every care will be taken to ensure your safety during the course of the study. The University of Bath, the Research Governance Sponsor of the study, has indemnity (insurance) arrangements in place but we anticipate that you will find being part of the study a positive experience.

What to do next if I'm interested?

If you would like to participate or wish to discuss the study further you can contact: Taruna Jamalamadaka, Clinical Psychologist in training, using the details provided below.

Many thanks for taking the time to read this.

Yours sincerely,

Taruna Jamalamadaka
Department of Psychology,
10 West, University of Bath,
Bath, BA2 7AY
Telephone: 07828462480
Email: t.jamalamadaka@bath.ac.uk

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Department of Psychology,
10 West, University of Bath,
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Dr Emma Griffith
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Cheltenham GL53 9DZ
Telephone: 01242 634037
Email: hannah.steer@nhs.net

Participant Information Sheet – Clinical Participants

Participant Information Sheet

We would like you to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Title of Project

How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?

Why is this study being done?

People sometimes have concerns about their mental health. This could especially be true in the case of people who have previously experienced mental health problems, who might be concerned that they may become ill again. We are interested in understanding the different ways people react to ideas about their mental health.

Do I have to take part?

You do not have to take part in the study. If you decide to take part and then later change your mind, you can ask for your data to be destroyed, provided this is before the study is published (without any information that can identify you). Taking part, or otherwise, in the study will not affect the treatment that you might be currently receiving or might receive in the future.

What will I be asked to do if I take part?

1. We will need your consent for your mental health team to tell us what your main diagnosis is.
2. If you have a mental health condition that we are looking at and consider yourself to be recovering from this condition, and are happy to take part we will ask you to sign a consent form and complete a questionnaire pack. This will take approximately 30 minutes to fill in.
3. The questionnaire pack can be completed in one of the following ways:
    - Face-to-face with the main researcher (Taruna),
    - At home and sent back to us in a freepost envelope, or
    - Online

Where will the study take place?

We can support you to complete the questionnaires (should you prefer this) at an NHS location convenient to you (e.g., your GP surgery). The questionnaires can also be sent to an address you provide us with a freepost return envelope included. Alternatively, we can send you a web link to the questionnaire pack.

Will my experiences and reports be kept confidential?

Yes. All information collected about you during the course of the research will be kept confidential. This means that all information will be locked away or password protected with access restricted to study personnel and any information about you will have your name and address removed so that you cannot be identified from it. Only in exceptional circumstances where a risk to yourself or another person requires action might confidentiality need to be broken in which case we will discuss this with you before doing anything.

We will report our findings in academic/health-related journals and present them to relevant health professionals at meetings and conferences. The findings will also contribute to Taruna Jamalamadaka's Doctorate in Clinical Psychology. You will not be identified in any reports or publications arising from the study.

Are there any advantages/benefits from taking part?

We cannot promise the study will help you directly but the information collected from you and other participants may help to improve our understanding of fear of illness recurrence. A further benefit of this type of research will be to inform the way service users and clinicians try to deal with worries about a mental illness recurring.

You will also receive a £5 LovetoShop voucher as a thank you for participating in the study.

Are there any disadvantages/risks from taking part?

We consider there to be minimal disadvantages e.g. the inconvenience of a meeting and completing the questionnaires. However, the meeting will be arranged at a time and place that it suitable for you and you can complete the questionnaires in your own time.

While this is very unlikely, should you experience any distress as a result of your participation in this study please let Taruna, the main researcher (who is final year Clinical Psychology trainee) know and she will be able to offer you some support. Taruna will let your care coordinator or care team know that this has happened so they can give you further support should you need this.

This study has been approved by the University of Bath Ethics Committee (ref:) and the Health Research Authority (ref:).

What if there is a problem?

If you have any concerns or wish to complain about any aspect of the way you have been approached or treated as part of this study, you should initially contact the researchers, Taruna Jamalamadaka, Professor Paul Salkovskis, Dr Emma Griffith or Dr Hannah Steer who will do their best to answer your questions. Their contact details are provided at the end of this information sheet. If you remain unhappy and wish to complain formally, you can do by contacting the University of Bath Secretary, Mark Humphriss, on 01225 386 212 or universitysec@bath.ac.uk.

Every care will be taken to ensure your safety during the course of the study. The University of Bath, the Research Governance Sponsor of the study, has indemnity

(insurance) arrangements in place but we anticipate that you will find being part of the study a positive experience.

What to do next if I'm interested?

If you would like to participate or wish to discuss the study further you can contact: Taruna Jamalamadaka, Clinical Psychologist in training, using the details provided below. Alternatively, you can ask the clinician that you might have received this information sheet from to pass your contact details to Taruna for her to contact you directly.

Many thanks for taking the time to read this.

Yours sincerely,

Taruna Jamalamadaka
Department of Psychology,
10 West, University of Bath,
Bath, BA2 7AY
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Telephone: 01242 634037
Email: hannah.steer@nhs.net

Consent Form

Department of Psychology | UNIVERSITY OF BATH

V1: 18/11/2016
IRAS Project ID: 216534

Participant identification number for study:

Consent Form

You have been invited to take part in a study that will look at different ways people think and react to worries about their mental health and the effect this may have on their future mental health. This form is to seek your consent to take part in the study. The researcher carrying out the study is called Taruna Jamalamdaka and is a Clinical Psychologist in training. She is based in the NHS and also registered with University of Bath, undertaking a Doctorate in Clinical Psychology. Her work in this study is being conducted under the supervision of Dr Emma Griffith (Clinical Tutor, University of Bath), Professor Paul Salkovskis (University of Bath), and Dr Hannah Steer (Clinical Psychologist, 2gether NHS Foundation Trust).

This study has been approved by the University of Bath Ethics Committee (ref:) and the Health Research Authority (ref:).

	Please initial all boxes
1. I confirm that I have read and have understood the information sheet dated for the above project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected.	☐
3. I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide. I can also request the destruction of that information if I wish any time **before** the information is published.	☐
4. I understand that data collected during the study will be anonymised so that no information that could identify me will be included.	☐
5. I understand all of my information will be kept confidential (other than exceptional circumstances where a risk to myself or another person requires action).	☐
6. I am willing for the data from my questionnaire to be used in presentations and publications by the Researcher on the understanding that all identifying features will be removed and I cannot be identified.	☐
7. I agree to take part in the above study.	☐

Participant Name	Date	Signature
Researcher	Date	Signature

The contact details of lead Researcher (Principal Investigator) are:
Taruna Jamalamadaka, Clinical Psychologist in training |
Contact email: t.jamalamadaka@bath.ac.uk |
10 West, University of Bath, Bath, BA2 7AY

Demographic information

Participant Identification Number:

Please answer the following questions:

1. Gender: ☐ Female ☐ Male ☐ Other (please tick one)

If you selected other, please specify: _____

2. Age: ___ years (please fill in)

3. What is your ethnic group?
- ☐ Asian
- ☐ Black (Caribbean, African, Others)
- ☐ Caucasian
- ☐ Mixed Background
- ☐ Other: _____

4. What is your highest educational qualification
- ☐ No formal qualification
- ☐ Primary
- ☐ Secondary (e.g. GCSE, O-Levels, GNVQ)
- ☐ Diploma (or professional qualification)
- ☐ Degree
- ☐ Postgraduate
- ☐ Other: _____

5. What is your relationship status?
- ☐ Single
- ☐ Dating
- ☐ Cohabiting
- ☐ Married
- ☐ Separating
- ☐ Divorced
- ☐ Widowed
- ☐ Other: _____

6. What is your employment situation?
- ☐ Paid work
- ☐ Unpaid work
- ☐ On sick leave
- ☐ Unemployed
- ☐ Other: _____

7. Would you like to receive a summary of the study results sent to you?
☐ Yes ☐ No

If yes, please provide your email or postal address:

About your illness

1. Have you experienced a mental illness for which you received a diagnosis or treatment?

☐ Yes ☐ No (please tick one)

If NO, go to page 3, marked GAD-7

2. If yes, what is/was your main diagnosis?

☐ Schizophrenia
☐ Bipolar Disorder
☐ Personality disorder
☐ Depression
☐ An anxiety disorder (panic, obsessive-compulsive disorder, generalised anxiety, health anxiety, social anxiety, phobia etc.)
☐ Other
☐ Not applicable

If you selected other, please specify: _____

3. How many episodes of mental illness would you say you have experienced? Please write '0' if you have never experienced a mental illness for which you received a diagnosis or treatment.

_____

4. Have you experienced psychosis (hallucinations, paranoia, delusions) as part of your mental illness?

☐ Yes ☐ No ☐ Not applicable

5. By your own standards, would you describe yourself as having a satisfying and fulfilling life? (Circle one)

Strongly disagree	Disagree	Moderately disagree	Mildly disagree	Neutral	Mildly agree	Moderately agree	Agree	Strongly agree

6. Would you say that you have been able to build a life beyond your mental illness (even if all your symptoms haven't disappeared)? (Circle one)

Strongly disagree	Disagree	Moderately disagree	Mildly disagree	Neutral	Mildly agree	Moderately agree	Agree	Strongly agree

GAD- 7

1. Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	☐	☐	☐	☐
Not being able to stop or control worrying	☐	☐	☐	☐
Worrying too much about different things	☐	☐	☐	☐
Trouble relaxing	☐	☐	☐	☐
Being so restless that it is hard to sit still	☐	☐	☐	☐
Becoming easily annoyed or irritable	☐	☐	☐	☐
Feeling afraid as if something awful might happen	☐	☐	☐	☐
	Not at all	Several days	More than half the days	Nearly every day

2. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? (Circle one)

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult

PHQ-9

3. Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing thing	☐	☐	☐	☐
Feeling down, depressed, or hopeless	☐	☐	☐	☐
Trouble falling or staying asleep, or sleeping too much	☐	☐	☐	☐
Feeling tired or having little energy	☐	☐	☐	☐
Poor appetite or overeating	☐	☐	☐	☐
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	☐	☐	☐	☐
Trouble concentrating on things, such as reading the newspaper or watching television	☐	☐	☐	☐
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	☐	☐	☐	☐
Thoughts that you would be better off dead or of hurting yourself in some way	☐	☐	☐	☐
	Not at all	Several days	More than half the days	Nearly every day

4. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? (Circle one)

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult

Work and Social Adjustment Scale

People's problems sometimes affect their ability to do certain day-to-day tasks in their lives. To rate your problems, look at each section and determine on the scale provided how much your problem impairs your ability to carry out the activity. '0' means 'not at all impaired' and '8' means 'very severely impaired' to the point you can't work.

	0 - not at all impaired	1	2 - slightly impaired	3	4 - definitely impaired	5	6 - markedly impaired	7	8 - very severely impaired	Not applicable
Because of my mental health problem my ability to work is impaired	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Because of my mental health problem my home management is impaired	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Because of my mental health problem my social leisure activities is impaired	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Because of my mental health problem my private leisure activities is impaired	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Because of my mental health problem my ability to form and maintain close relationships with others, including those I live with, is impaired	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Self Perception Scale -MH

In the following, you will find a number of statements that describe thoughts and feelings that people sometimes experience. Please rate the extent to which these statements apply to your experience at present by selecting the appropriate answer. There are no right or wrong answers to these questions.

Please remember that this section is about **how you feel and think at present**.

Because of my mental health symptoms the following thought/feeling applied to me

	Not at all/ Never (0)	Very little (1)	Moderately (2)	Strongly (3)	Very strongly (4)
I feel defeated by life	☐	☐	☐	☐	☐
I feel that I have lost my standing in the world	☐	☐	☐	☐	☐
I feel that life has treated me like a punchbag	☐	☐	☐	☐	☐
I feel powerless	☐	☐	☐	☐	☐
I feel that my confidence has been knocked out of me	☐	☐	☐	☐	☐
I don't feel able to deal with things that life throws at me	☐	☐	☐	☐	☐
I feel that I have sunk to the bottom of the ladder	☐	☐	☐	☐	☐
I feel completely knocked out of action	☐	☐	☐	☐	☐
I feel that I am one of life's losers	☐	☐	☐	☐	☐
I feel that I have given up	☐	☐	☐	☐	☐
	Not at all/ Never (0)	Very little (1)	Moderately (2)	Strongly (3)	Very strongly (4)

	Not at all/ Never (0)	Very little (1)	Moderately (2)	Strongly (3)	Very strongly (4)
I feel down and out	☐	☐	☐	☐	☐
I feel I have lost important battles in life	☐	☐	☐	☐	☐
I feel that there is no fight left in me	☐	☐	☐	☐	☐
I feel I am losing my will power	☐	☐	☐	☐	☐
I don't care what happens to me anymore	☐	☐	☐	☐	☐
I feel defeated	☐	☐	☐	☐	☐
I feel less like a human being	☐	☐	☐	☐	☐
In my mind, I give up	☐	☐	☐	☐	☐
I feel destroyed as a person	☐	☐	☐	☐	☐
I felt like I wanted to die	☐	☐	☐	☐	☐
I feel like I am losing my inner resistance	☐	☐	☐	☐	☐
I feel like an object	☐	☐	☐	☐	☐
I feel completely at the mercy of what is happening to me	☐	☐	☐	☐	☐
I feel humiliated and that I am losing my sense of inner dignity	☐	☐	☐	☐	☐
	Not at all/ Never (0)	Very little (1)	Moderately (2)	Strongly (3)	Very strongly (4)

Reactions to Mental Health Worries Questionnaire

Often when people feel anxious or distressed about their mental health or state of mind, they may react in a number of ways. The questions below are about **ways in which you might react to your worries about your mental health**.

Please rate each item of the questionnaire using the following scale and **select the option you find most fitting**.

	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)
I pay careful attention to whether my mind is working properly or not	☐	☐	☐	☐	☐	☐
I ask for reassurance from people close to me	☐	☐	☐	☐	☐	☐
I test myself to make sure my mind is working properly	☐	☐	☐	☐	☐	☐
I avoid situations which might make me feel upset because they could be harmful to my mental health	☐	☐	☐	☐	☐	☐
I believe that my anxiety will not go down until I get reassurance	☐	☐	☐	☐	☐	☐
I make an appointment to see a doctor	☐	☐	☐	☐	☐	☐
I distract myself	☐	☐	☐	☐	☐	☐
I focus on physical activities such as exercise	☐	☐	☐	☐	☐	☐
I ask for reassurance from people I know	☐	☐	☐	☐	☐	☐
I avoid doing anything stressful in case it overwhelms me	☐	☐	☐	☐	☐	☐
	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)

	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)
I try to spend more time with other people	☐	☐	☐	☐	☐	☐
I try to understand my worries	☐	☐	☐	☐	☐	☐
I concentrate on work or another activity	☐	☐	☐	☐	☐	☐
I discuss my worries with someone	☐	☐	☐	☐	☐	☐
I am critical of myself for having these worries	☐	☐	☐	☐	☐	☐
I hope that my worries would disappear soon	☐	☐	☐	☐	☐	☐
I pretend that my worries did not matter	☐	☐	☐	☐	☐	☐
I try to focus on the positives in my life	☐	☐	☐	☐	☐	☐
I sleep a lot	☐	☐	☐	☐	☐	☐
I seek reassurance more often than necessary	☐	☐	☐	☐	☐	☐
I try not to think about my worries	☐	☐	☐	☐	☐	☐
I try to rest	☐	☐	☐	☐	☐	☐
I drink to manage my worries	☐	☐	☐	☐	☐	☐
I avoid being with other people	☐	☐	☐	☐	☐	☐
I give it some time before deciding if I should do anything	☐	☐	☐	☐	☐	☐
I take it out on people around me	☐	☐	☐	☐	☐	☐
I pretend that nothing is wrong	☐	☐	☐	☐	☐	☐
	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)

	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)
I pray	☐	☐	☐	☐	☐	☐
I make a plan of what to do	☐	☐	☐	☐	☐	☐
I try to remember how I managed the last time I felt this way	☐	☐	☐	☐	☐	☐
I am angry with fate/ the world	☐	☐	☐	☐	☐	☐
I eat to manage my worries	☐	☐	☐	☐	☐	☐
I seek reassurance to make sure there is nothing wrong with my mental health	☐	☐	☐	☐	☐	☐
	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Very often (4)	Always (5)

Mental Health Anxiety Inventory

Each question in this section consists of a group of four statements. Please read each group of statements carefully and then select the one that best describes your feelings about your mental well being **over the past 6 months**.

Identify the statement by ticking the box next to it; it may be that more than one statement applies, in which case, please tick any that are applicable. **Please answer all questions.**

Please be aware that for the purpose of this survey the terms "**mental**" and "**psychological**" mean the same thing.

1.

☐ I do not worry about my mental health.

☐ I occasionally worry about my mental health.

☐ I spend much of my time worrying about my mental health.

☐ I spend most of my time worrying about my mental health.

2.

☐ I notice unusual changes in my mental state less than most other people (Of my age).

☐ I notice unusual changes in my mental state as much as most other people (Of my age).

☐ I notice unusual changes in my mental state more than most other people (Of my age).

☐ I am aware of unusual changes in my mental state all the time.

3.

☐ As a rule I am not aware of unusual things happening in my mind.

☐ Sometimes I am aware of unusual things happening in my mind.

☐ I am often aware of unusual things happening in my mind.

☐ I am constantly aware of unusual things happening in my mind.

4.

☐ Resisting thoughts of mental illness is never a problem.

☐ Most of the time I can resist thoughts of mental illness.

☐ I try to resist thoughts of mental illness but am often unable to do so.

☐ Thoughts of mental illness are so strong that I no longer even try to resist them.

5.

☐ As a rule I am not afraid that I have a serious mental illness.

☐ I am sometimes afraid that I have a serious mental illness.

☐ I am often afraid that I have a serious mental illness.

☐ I am always afraid that I have a serious mental illness.

6.

☐ I do not have images (mental pictures) of myself being mentally ill.

☐ I occasionally have images of myself being mentally ill.

☐ I frequently have images of myself being mentally ill.

☐ I constantly have images of myself being mentally ill.

7.

☐ I do not have any difficulty taking my mind off thoughts about my mental health.

☐ I sometimes have difficulty taking my mind off thoughts about my mental health.

☐ I often have difficulty in taking my mind off thoughts about my mental health.

☐ Nothing can take my mind off thoughts about my mental health.

8.

☐ I am lastingly relieved if my doctor or mental health professional tells me there is nothing wrong.

☐ I am initially relieved but the worries sometimes return later.

☐ I am initially relieved but the worries always return later.

☐ I am not relieved if my doctor or mental health professional tells me there is nothing wrong.

9.

☐ If I hear about a mental illness I never think I have it myself.

☐ If I hear about a mental illness I sometimes think I have it myself.

☐ If I hear about a mental illness I often think I have it myself.

☐ If I hear about a mental illness I always think I have it myself.

10.

☐ If I experience an unexpected mental event I rarely wonder what it means.

☐ If I experience an unexpected mental event I often wonder what it means.

☐ If I experience an unexpected mental event I always wonder what it means.

☐ If I experience an unexpected mental event I must know what it means.

11.

☐ I usually feel at very low risk for developing a serious mental illness.

☐ I usually feel at fairly low risk for developing a serious mental illness.

☐ I usually feel at moderate risk for developing a serious mental illness.

☐ I usually feel at high risk for developing a serious mental illness.

12.

☐ I never think I have a serious mental illness.

☐ I sometimes think I have a serious mental illness.

☐ I often think I have a serious mental illness.

☐ I usually think that I am seriously mentally ill.

13.

☐ If I notice an unexplained psychological sensation I don't find it difficult to think about other things.

☐ If I notice an unexplained psychological sensation I sometimes find it difficult to think about other things.

☐ If I notice an unexplained psychological sensation I often find it difficult to think about other things.

☐ If I notice an unexplained psychological sensation I always find it difficult to think about other things.

14.

☐ My family and friends would say I do not worry enough about my mental health.

☐ My family and friends would say I have a normal attitude to my mental health.

☐ My family and friends would say I worry too much about my mental health.

☐ My family and friends would say I am a hypochondriac.

For the following questions, **please think about what it might be like if you had a serious mental illness of a type that particularly concerns you** (for e.g. schizophrenia, bi-polar, and so on). Obviously you cannot know for definite what it would be like; please give your best estimate of what you think might happen, basing your estimate on what you know about yourself and serious mental illness in general.

15.

☐ If I had a serious mental illness I would still be able to enjoy things in my life quite a lot.

☐ If I had a serious mental illness I would still be able to enjoy things in my life a little.

☐ If I had a serious mental illness I would be almost completely unable to enjoy things in my life.

☐ If I had a serious mental illness I would be completely unable to enjoy life at all.

16.

☐ If I developed a serious mental illness there is a good chance that modern medicine would be able to cure me.

☐ If I developed a serious mental illness there is a moderate chance that modern medicine would be able to cure me.

☐ If I developed a serious mental illness there is a very small chance that modern medicine would be able to cure me.

☐ If I developed a serious mental illness there is no chance that modern medicine would be able to cure me.

17.

☐ A serious mental illness would ruin some aspects of my life.

☐ A serious mental illness would ruin many aspects of my life.

☐ A serious mental illness would ruin almost every aspect of my life.

☐ A serious mental illness would ruin every aspect of my life.

18.

☐ If I had a serious mental illness I would not feel that I had lost my dignity.

☐ If I had a serious mental illness I would feel that I had lost a little of my dignity.

☐ If I had a serious mental illness I would feel that I had lost quite a lot of my dignity.

☐ If I had a serious mental illness I would feel that I had totally lost my dignity.

Fear of Recurrence Scale

This section is concerned with problems and complaints people sometimes have. Please read each item carefully and select the appropriate option that best describes how you have been **over the last two weeks including today**.

	Do not agree (1)	Agree slightly (2)	Agree moderately (3)	Agree very much (4)
I have been worrying about relapse.	☐	☐	☐	☐
I have been remembering previous episodes of being unwell.	☐	☐	☐	☐
I have been more aware of my thoughts.	☐	☐	☐	☐
I have experienced thoughts intruding into my mind.	☐	☐	☐	☐
I have been worrying about my thoughts.	☐	☐	☐	☐
I have felt unable to control my illness.	☐	☐	☐	☐
I have been worrying about being in hospital.	☐	☐	☐	☐
I have lacked confidence in my ability to cope.	☐	☐	☐	☐
My thoughts have been uncontrollable.	☐	☐	☐	☐
My thoughts have been going too fast.	☐	☐	☐	☐
I have been worrying about losing control.	☐	☐	☐	☐
	Do not agree (1)	Agree slightly (2)	Agree moderately (3)	Agree very much (4)

	Do not agree (1)	Agree slightly (2)	Agree moderately (3)	Agree very much (4)
My thoughts have been distressing.	☐	☐	☐	☐
I have felt more in touch with my thoughts.	☐	☐	☐	☐
I have been constantly aware of my thoughts.	☐	☐	☐	☐
I have been unable to switch off my thinking.	☐	☐	☐	☐
I have paid close attention to how my mind is working.	☐	☐	☐	☐
The world has seemed more vivid and colourful.	☐	☐	☐	☐
My thoughts have been more interesting.	☐	☐	☐	☐
I have had new insights and ideas.	☐	☐	☐	☐
Unpleasant thoughts have entered my head against my will.	☐	☐	☐	☐
My thinking has been clearer than usual.	☐	☐	☐	☐
I have been checking my thoughts.	☐	☐	☐	☐
The thought of becoming unwell has frightened me.	☐	☐	☐	☐
	Do not agree (1)	Agree slightly (2)	Agree moderately (3)	Agree very much (4)

Responsibility for Consultation Questionnaire- Mental Health

This questionnaire contains some ideas that may go through your mind **when you experience things that you think indicate increasing problems with your mental health which should perhaps be discussed with your doctor or a mental health professional.** You are asked to rate how much you believe these ideas when you have them.

Please rate your belief in these ideas during the time from **when you first thought that perhaps you might need to see the doctor/ mental health professional to when you actually went or decided not to**. The ideas may occur in any form, for example as a word, mental image or a sudden urge to carry out some action. Mental health symptoms and experiences can include many things, including mood changes, troubling thoughts, worries, etc.

When you have experiences about which you think that you may need to see a doctor or mental health professional, **how much do you believe each of these ideas to be true**? 0 means 'I do not believe this idea at all'; 100 means 'I am completely convinced that this idea is true'

	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true
I must tell them exactly what I'm experiencing.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true

	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true
If I don't pay attention to all my mental health symptoms, I may develop serious psychological problems without knowing it.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
If I am not fully aware of what I'm experiencing, and they tell me I am well when I am not, then it is my fault.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I must go to them just in case I have a serious psychological problem.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
If I don't keep a close watch on what I'm experiencing all the time, then I may miss something important.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true

	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true
If I fail to explain everything I am experiencing in detail, then it would be my fault if I developed a serious psychological problem to a stage too late for treatment.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It would be wrong not to mention everything I am experiencing, even the most minor mental health symptoms in case they are important.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
They may fail to realise that I have a serious psychological problem if I miss out any details about my experiences.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true

	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true
I'll only worry if I haven't told them exactly what my mental health symptoms are and how I feel.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I need to be sure that I get the right mental health diagnosis.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
If I don't go to them about what I'm experiencing, then it would be my fault if it got too late to do anything about a serious psychological problem.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It is best to know if I have a serious psychological problem as it may be possible to do something about it before it's too late.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true

	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true
I shouldn't go to them as it would be better not to know if I have a serious psychological problem.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
If I don't pay attention to what I am experiencing I may not be able to tell them everything they need to know.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I need to be certain that what I am experiencing doesn't mean that I have a serious psychological problem.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	0 - I do not believe in this idea at all	10	20	30	40	50	60	70	80	90	100 - I am completely convinced that this idea is true

----------End of questionnaire pack----------

Debrief sheet – Clinical Participants

Version 1: 18/11/2016

Psychological services

UNIVERSITY OF BATH

Study Debriefing

Many thanks for taking the time to help with this research, it is hugely appreciated.

This study was interested in finding out if people who have previously experienced mental health difficulties worry about their mental health problems coming back. We wondered if this worry is greater in certain groups of people than in others.

How was this studied?

In this study you were asked to complete several questionnaires. Three groups of participants completed these questionnaires: those who have previously experienced psychosis, those who have previously experienced any other mental health problem, and those who have never experienced a mental health problem.

Hypotheses and main questions

We expect to find that people who have previously experienced psychosis as part of any mental health problem e.g., bipolar mood disorder, schizophrenia, etc. will have the greatest concerns about their mental health difficulties returning out of the three groups.

Why is this important to study?

It is really interesting to work out if the worry about a mental illness coming back is greater in people who have experienced psychosis than in the other two groups. We already know that this worry can make it more likely that someone will experience a relapse. If our hypothesis that people who have experienced psychosis are most fearful of relapse is true, this would suggest that treatment and techniques to manage worry and anxiety could help prevent relapse. While we hypothesize that this worry is less in those who have recovered from anxiety disorders and depression, information from this study will help us make recommendations about the treatment and management of these conditions, too.

What if I want to know more?

If you are interested in learning more about this area I would be happy to forward you some research articles or have a discussion. Additionally, please let me know if you would like me to have your email address so I can forward you the results of this study once it is completed or if you are interested in taking part in other research projects. If you know anyone else who is doing the study please do not discuss the details of the study with him or her until after they have taken part.

If you are feeling at all distressed by the study or any of this information please inform Taruna (details below), who can offer you some support and signpost to your care-coordinator or care team if needed.

If you would like to speak to an independent support service you are advised to seek help from the Samaritans on their UK helpline number: 116 123

If you have concerns about the study please contact the main researcher, Taruna Jamalamadaka (t.jamalamadaka@bath.ac.uk, 07828462480), in the first instance, the field supervisor, Hannah Steer (hannah.steer@nhs.net), or the University of Bath Secretary, Mark Humphriss, on 01225 386 212 or universitysec@bath.ac.uk.

Thank you again for your participation. I hope you have enjoyed taking part.

IRAS Project ID: 216534

Debrief sheet – Healthy Controls

Version 1 (HC): 18/11/2016

UNIVERSITY OF BATH

Study Debriefing

Many thanks for taking the time to help with this research, it is hugely appreciated.

This study was interested in finding out if people who have previously experienced mental health difficulties worry about their mental health problems coming back. We wondered if this worry is greater in certain groups of people than in others.

How was this studied?

In this study you were asked to complete several questionnaires. Three groups of participants completed these questionnaires: those who have previously experienced psychosis, those who have previously experienced any other mental health problem, and those who have never experienced a mental health problem.

Hypotheses and main questions

We expect to find that people who have previously experienced psychosis as part of any mental health problem e.g., bipolar mood disorder, schizophrenia, etc. will have the greatest concerns about their mental health difficulties returning out of the three groups.

Why is this important to study?

It is really interesting to work out if the worry about a mental illness coming back is greater in people who have experienced psychosis than in the other two groups. We already know that this worry can make it more likely that someone will experience a relapse. If our hypothesis that people who have experienced psychosis are most fearful of relapse is true, this would suggest that treatment and techniques to manage worry and anxiety could help prevent relapse. While we hypothesize that this worry is less in those who have recovered from anxiety disorders and depression, information from this study will help us make recommendations about the treatment and management of these conditions, too.

What if I want to know more?

If you are interested in learning more about this area I would be happy to forward you some research articles or have a discussion. Additionally, please let me know if you would like me to have your email address so I can forward you the results of this study once it is completed or if you are interested in taking part in other research projects. If you know anyone else who is doing the study please do not discuss the details of the study with him or her until after they have taken part.

If you are feeling at all distressed by the study or any of this information please inform Taruna (details below), who can offer you some support. If needed, with your permission, Taruna might inform your GP that you were distressed.

If you would like to speak to an independent support service you are advised to seek help from the Samaritans on their UK helpline number: 116 123

If you have concerns about the study please contact the main researcher, Taruna Jamalamadaka (t.jamalamadaka@bath.ac.uk, 07828462480), in the first instance, the field supervisor, Hannah Steer (hannah.steer@nhs.net), or the University of Bath Secretary, Mark Humphriss, on 01225 386 212 or universitysec@bath.ac.uk.

Thank you again for your participation. I hope you have enjoyed taking part.

IRAS Project ID: 216534

Appendix M

Documents showing ethical approval

REC Approval Letter

NHS
Health Research Authority
London - London Bridge Research Ethics Committee
Skipton House
80 London Road
London
SE1 6LH

Telephone: 02071048308
Fax:

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

20 February 2017

Ms Taruna Jamalamadaka
Clinical Psychologist in training
Taunton and Somerset NHS Foundation Trust
University of Bath, Department of Psychology
10 West, University of Bath, Claverton Down,
Bath
BA2 7AY

Dear Ms Jamalamadaka

Study title:	**How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?**
REC reference:	**17/LO/0068**
Protocol number:	**N/A**
IRAS project ID:	**216534**

Thank you for your letter responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further

information, or wish to make a request to postpone publication, please contact hra.studyregistration@nhs.net outlining the reasons for your request.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for NHS permission for research is available in the Integrated Research Application System, www.hra.nhs.uk or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from the HRA. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [TJ MRP Study clinical participants- poster - Version 2]	2	07 February 2017
Copies of advertisement materials for research participants [TJ MRP Clinical participants - poster - Version 2 - clean]	2 -clean	07 February 2017
Copies of advertisement materials for research participants [TJ MRP Study healthy controls- poster - Version 2]	2	07 February 2017
Copies of advertisement materials for research participants [TJ MRP Study healthy controls- poster - Version 2 - clean]	2 -clean	07 February 2017
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Evidence of Sponsor insurance or indemnity]	1	18 July 2016
IRAS Application Form [IRAS_Form_15122016]		15 December 2016
IRAS Checklist XML [Checklist_15022017]		15 February 2017
Letter from sponsor [Sponsorship Approval Letter]	1	04 November 2016
Letters of invitation to participant [TJ MRP - Study Invitation - Version 2]	2	07 February 2017
Letters of invitation to participant [TJ MRP - Study Invitation - Version 2 - clean]	2 -clean	07 February 2017
Non-validated questionnaire [Reactions to Mental Health Worries Questionnaire]	1	13 December 2016
Non-validated questionnaire [Responsibility for Consultation Questionnaire - Mental Health]	1	13 December 2016
Other [HRA Schedule of Events]	1	18 November 2016
Other [Statement of Activities]	1	18 November 2016
Other [Online link to questionnaire pack]	1	04 December 2016
Other [TJ MRP - Questionnaire Pack (paper)]	1.1	07 February 2017
Other [TJ Questionnaire pack (paper) version 1.1 - clean]	1.1 clean	07 February 2017

Other [TJ MRP Research Team Approval Letter]	1.1	08 February 2017
Other [TJ MRP - Justification for use of the Responsibility for Consultation Questionnaire]	1.1	07 February 2017
Participant consent form [TJ MRP - Consent Form - Version 2]	2	07 February 2017
Participant consent form [TJ MRP - Consent Form - Version 2 - clean]	2 -clean	07 February 2017
Participant information sheet (PIS) [TJ MRP PIS Clinical participants - Version 2]	2	07 February 2017
Participant information sheet (PIS) [TJ MRP PIS Clinical participants - Version 2 - Clean]	2 -clean	07 February 2017
Participant information sheet (PIS) [TJ MRP PIS Healthy Controls - Version 2]	2	07 February 2017
Participant information sheet (PIS) [TJ MRP PIS Healthy Controls - Version 2 - clean]	2 -clean	07 February 2017
Participant information sheet (PIS) [TJ MRP Debrief form - Healthy Controls - Version 2]	2	07 February 2017
Participant information sheet (PIS) [TJ MRP Debrief form - Healthy Controls - Version 2 - clean]	2 -clean	07 February 2017
Participant information sheet (PIS) [TJ MRP Debrief form - Clinical Participants - Version 2]	2	07 February 2017
Participant information sheet (PIS) [TJ MRP Debrief form - Clinical Participants - Version 2 - clean]	2 -clean	07 February 2017
Research protocol or project proposal [TJ MRP Proposal]	1	18 November 2016
Summary CV for Chief Investigator (CI) [TJ MRP Summary CV]	1	18 November 2016
Summary CV for supervisor (student research) [CV Dr Emma Griffith]	1	28 November 2016
Summary CV for supervisor (student research) [CV Dr Paul Salkovskis]	1	02 December 2016
Summary CV for supervisor (student research) [Field supervisor Summary CV - Dr Hannah Steer]	1	06 December 2016
Summary, synopsis or diagram (flowchart) of protocol in non technical language [TJ MRP Flowchart]	1	18 November 2016
Validated questionnaire [TJ MRP Questionnaire Pack - paper version]	1	18 November 2016
Validated questionnaire [GAD 7]	1	13 December 2016
Validated questionnaire [PHQ 9]	1	13 December 2016
Validated questionnaire [Work and Social Adjustment Scale]	1	13 December 2016
Validated questionnaire [Self Perception Scale]	1	13 December 2016
Validated questionnaire [Fear of Recurrence Scale]	1	13 December 2016
Validated questionnaire [Mental Health Anxiety Inventory]	1	13 December 2016

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website:
http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

17/LO/0068	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project.

Yours sincerely

PP

Professor David Bartlett
Chair

Email:nrescommittee.london-londonbridge@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: *Prof Jonathan Knight*
Laura Armstrong-James, Avon and Wiltshire Mental Health Partnership NHS Trust

HRA Approval Letter

NHS
Health Research Authority

Ms Taruna Jamalamadaka
Clinical Psychologist in training
Taunton and Somerset NHS Foundation Trust
University of Bath, Department of Psychology
10 West, University of Bath, Claverton Down,
Bath
BA2 7AY

Email: hra.approval@nhs.net

27 February 2017

Dear Ms Jamalamadaka

Letter of HRA Approval

Study title:	**How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?**
IRAS project ID:	**216534**
REC reference:	**17/LO/0068**
Sponsor	**University of Bath**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

IRAS project ID	216534

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The document *"After Ethical Review – guidance for sponsors and investigators",* issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

In addition to the guidance in the above, please note the following:

- HRA Approval applies for the duration of your REC favourable opinion, unless otherwise notified in writing by the HRA.
- Substantial amendments should be submitted directly to the Research Ethics Committee, as detailed in the *After Ethical Review* document. Non-substantial amendments should be submitted for review by the HRA using the form provided on the HRA website, and emailed to hra.amendments@nhs.net.
- The HRA will categorise amendments (substantial and non-substantial) and issue confirmation of continued HRA Approval. Further details can be found on the HRA website.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application

IRAS project ID	216534

procedure. If you wish to make your views known please email the HRA at hra.approval@nhs.net. Additionally, one of our staff would be happy to call and discuss your experience of HRA Approval.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

Your IRAS project ID is **216534**. Please quote this on all correspondence.

Yours sincerely

Beverley Mashegede
Assessor

Email: hra.approval@nhs.net

Copy to: Prof Jonathan Knight, Sponsor Contact

Laura Armstrong-James, Lead NHS R&D Contact

Dr Emma Griffith, Academic Supervisor

Psychology Research Ethics Committee Approval

Nathalia Gjersoe 3 March 2017 at 16:02

Re: Chair's approval possible? Urgent: Taruna Jamalamadaka DClinPsy Main Research Project - Psychology Ethics application - HRA and IRAS approved Hide

To: Taruna Jamalamadaka,

Cc: Cara Davis

NG

Dear Taruna Jamalamadaka
Reference Number (17-063, Fear of illness recurrence in psychosis)

Two members of the ethics committee have considered your ethics proposal for the study above and I am happy to confirm that they have given it full ethical approval.

Best wishes with your research,
Dr Nathalia Gjersoe
Chair, Psychology Research Ethics Committee

Avon and Wiltshire Mental Health Partnership NHS Trust Research and Development Team Approval

ARMSTRONG-JAMES, Laura (AVON AND WILTSHIRE MENTAL HEALTH PARTNERSHIP NHS TRUST) 8 March 2017 at 08:48
982AWP R&D confirmation Details
To: Taruna Jamalamadaka, Cc: e.j.griffith@bath.ac.uk, Paul Salkovskis, pro-vc-research@bath.ac.uk

Dear Taruna,

Title of study: How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?
AWP ref. 982AWP
R&D confirmation date: 8 March 2017
Recruitment end date: 30 September 2017
Study end date: 30 September 2018

Thank you very much for applying to undertake your research in AWP, we pride ourselves on a straight forward and rapid process for research governance.

We are pleased to advise we are able to grant R&D Confirmation at Avon and Wiltshire Mental Health Partnership NHS Trust ("the Trust") to cover the locations as stated above. Please find attached the AWP logo to use on any local documents you will be issuing i.e. information sheets and consent forms.

Under the conditions of approval, you are required to:

1. Document any study activity on RiO for the relevant patient records, if applicable. Please refer to the attached RiO guidance document. If you do not have access to RiO and only need to update service user's records as above, you can ask a member of the clinical team to do this for you. Please ensure the attached procedures are still adhered to. If you need access to RiO for any other reason, please advise the AWP R&D office using the contact details below.

2. Update recruitment figures regularly via EDGE (a Clinical Management System). This enables us to keep a clear track of all Trust-wide study activity, which we need to report to our research funders. **Failure to comply with this will result in your research being suspended, so please make sure you complete this on a monthly basis.** We will set up an account for you, and your login instructions will be emailed to you. Please refer to the attached EDGE guidance document.

3. To meet AWP R&D audit requirements and adhere to Good Clinical Practice guidelines, you will also need to ensue you create and manage a study site file. If you need more information on this please contact the AWP R&D department or visit the NIHR website: http://www.crn.nihr.ac.uk/learning-development/good-clinical-practice/gcp-resources-templates-and-reference-documents/

The R&D Management Permission in the Trust is valid until 30 September 2018. If you require any extension to this in the future please contact us to arrange.

We hope you are successful in your recruitment aims and objectives.

2gether NHS Foundation Trust Research and Development Team Approval

Walker Mark
RE: SoE and SoA: RE: HRA Approval received -RE: University of Bath project awaiting HRA approval - Fear of illness recurrence in psychosis study - recruitment
To: STEER, Hannah (2GETHER NHS FOUNDATION TRUST), Taruna Jamalamadaka, Johnson Nigel, Cc: RILEY, Genevieve (2GETHER NHS FOUNDATION TRUST)

4 April 2017 at 17:09
Details

WM

Dear Taruna

RE: How are fear of illness recurrence, health behaviours and psychological distress affected by mental defeat and mental health anxiety in people recovering from psychosis?
REC: 17/LO/0068
R&D Ref: 17/010/2GT

Thank you for sending us the information on the above study. This email confirms that 2gether NHS Foundation Trust has the capability and capacity to act as a PIC site for your study and you may begin identification and recruitment of participants upon receipt.

I have not completed the Statement of Activities for this study as we are only acting as a PIC but, if you would like a completed SoA, please let me know. Also, if you would like a formal letter of approval, please let Nigel know and he will be able to draft you one.

We agreed that a Letter of Access was not required as the research activity for participants would take place on line or via mail with no direct contact between them and yourself as the researcher. If this changes at any point just let me know and we can issue the appropriate paperwork.

If you have any questions about the approval process please let me know.

Otherwise, please accept my apologies for the delay in getting back to you and my best wishes for the project.

Kind regards

Mark

Senior Research Manager - Governance
Gloucestershire Research Support Service
Leadon House
Gloucestershire Royal Hospital
Great Western Road
Gloucester
GL1 3NN